

Rocky Flats Environmental Technology Site

MAN-066-COOP

REVISION 1

SITE CONDUCT OF OPERATIONS MANUAL

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
LIST OF EFFECTIVE PAGES	2
TABLE OF CONTENTS.....	3
1. PURPOSE.....	6
2. SCOPE.....	6
3. REQUIREMENTS DOCUMENTS	6
4. OVERVIEW	6
4.1 BACKGROUND.....	6
4.2 COOP IMPLEMENTATION	7
5. RESPONSIBILITIES	8
5.1 PRESIDENT, KAISER-HILL COMPANY, LLC (K-H).....	8
5.2 K-H VICE PRESIDENTS AND PROJECT MANAGERS	8
5.3 VICE PRESIDENT AND DIRECTOR, ENGINEERING, ENVIRONMENTAL, SAFETY & QUALITY PROGRAMS	8
5.4 SITE CONDUCT OF OPERATIONS PROGRAM MANAGER.....	8
5.5 LINE MANAGEMENT	8
5.6 FACILITY MANAGER (FM)	8
5.7 SHIFT MANAGER (SM)	9
5.8 SHIFT TECHNICAL ADVISOR (STA).....	9
5.9 FIRST LINE SUPERVISORS AND MANAGERS	10
5.10 OPERATIONS AND SUPPORT PERSONNEL.....	10
5.11 PERSONNEL ENTERING OPERATIONAL FACILITIES	10
6. COOP REQUIREMENTS	11
6.1 OPERATING POLICY	11
6.2 AUTHORIZATION BASIS (AB).....	11
6.3 WORK CONTROL.....	11
6.3.1 General Controls.....	11
6.3.2 Plan of the Day (POD)	12
6.3.3 Pre-Evolution Briefings (PEBs) and Job Task Briefings (JTBs)	13
6.3.4 Temporary Modification (TM) Control.....	16
6.4 OPERATING PRACTICES	17
6.4.1 Access Controls.....	17
6.4.2 Shift Relief and Turnover	18
6.4.3 Work Stations and Control Rooms	19
6.4.4 Abnormal Events and Emergencies	20
6.4.5 Procedure Use	20
6.4.6 Standing, Operations, Shift, and Night Orders	22
6.4.7 Control and Use of Operator Aids	27
6.4.8 Communications	28
6.4.9 Logs and Round Sheets	30
6.4.10 Conduct of Operations Assessment and Lessons Learned	32
6.5 STAFFING AND TRAINING	33

6.5.1	Staff Requirements	33
6.5.2	Site Overtime and Total Hours Worked Limitations	33
6.5.3	Training Requirements	34
6.5.4	Required Reading Program	34
6.6	CONTROLLING SYSTEM OPERABILITY	35
6.6.1	Status Control	35
6.6.2	Configuration Control	36
6.6.3	Authorization Basis (AB) Surveillance and Compensatory Measure Tracking	36
6.6.4	Lockout/Tagout (LO/TO), Caution Tag, and Information Tag Requirements	39
6.6.5	Component Labeling	39
6.6.6	Removing Systems and Equipment from Service	39
6.6.7	Operability, Justification for Continued Operation (JCO), and AB Violations	40
6.6.8	Component Lineups and Independent Verification (IV)	43
6.6.9	Response to Indications	45
6.6.10	Response to Alarms	45
6.6.11	Nuisance Alarms	46
6.6.12	Controlled Deactivation of Alarms	46
6.6.13	Resetting Protective Devices	47
7.	RECORDS	47
7.1	DOCUMENTS DERIVED FROM THIS MANUAL	47
7.2	MAINTENANCE OF THIS MANUAL	48
7.3	RECORD PROCESSING	48
8.	REFERENCES	49
9.	APPENDICES	51
1.	DEFINITIONS AND ACRONYMS	51
1.1	SHALL, Should and May Statements	51
1.2	Definitions	51
1.3	Acronyms	53
2.	PLAN OF THE DAY CONTENT	55
3.	EVOLUTION REQUEST FORM	56
4.	PRE-EVOLUTION BRIEFING RECORD	57
5.	HAZARDOUS MATERIAL RELEASE PREVENTION/PREPAREDNESS CHECKLIST	61
6.	TEMPORARY MODIFICATION REQUEST FORM	62
7.	TEMPORARY MODIFICATION LOG SHEET	63
8.	TEMPORARY MODIFICATION TAG SHEET	64
9.	TEMPORARY MODIFICATION EXTENSION REQUEST	66
10.	TEMPORARY MODIFICATION TAG	67
11.	SHIFT RELIEF AND TURNOVER CHECKLIST	68
12.	STANDING ORDER FORMAT	69
13.	OPERATIONS ORDER EVALUATION CHECKLIST	70

14. OPERATIONS ORDER FORMAT	73
15. SHIFT ORDER FORMAT	74
16. OPERATOR AID POSTING LOG.....	75
17. COMMUNICATIONS GUIDE.....	76
18. RADIO COMMUNICATIONS GUIDE	77
19. ROUND SHEET FORMAT	78
20. INSPECTION DURING ROUND CHECKS.....	82
21. COMPLIANCE TRACKING INFORMATION GUIDE.....	84
22. TECHNICAL CONCERN ASSESSMENT CHECKLIST	85
23. RETURN-TO-SERVICE AND OPERABILITY CHECKLIST	87
24. RESUMPTION OF OPERATIONS FOLLOWING AN AUTHORIZATION BASIS VIOLATION.....	89
25. COMPONENT ALIGNMENT CHECKLIST	90
26. TECHNIQUES FOR USE IN COMPONENT ALIGNMENT AND INDEPENDENT VERIFICATION	91
27. ALARM DEACTIVATION REQUEST (ADR).....	93
28. DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1	95
29. CONDUCT OF OPERATIONS MANUAL REVISIONS 0 AND 1 CROSSWALK MATRIX	107

1. PURPOSE

This Manual defines the Site Conduct of Operations Program in order to comply with Department of Energy (DOE) Order 5480.19, Conduct of Operations Requirements for DOE Facilities. This revision supercedes Revision 0 and includes all previous Document Change Forms (DCF).

2. SCOPE

This Manual applies to operations and work conducted at the Site, in both operational and support groups. Conduct of Operations (COOP) is the Site core culture of formality and discipline wherein individuals seek and accept ownership of assigned systems and equipment. Conduct of Operations is also:

- Knowledge of requirements, and discipline in observing requirements in order to have an adequate "Safety Culture" at the Site.
- Formal, disciplined, and effective control of work.
- Founded upon training, qualification, and use of procedures.

Conduct of Operations establishes a methodology for conducting operations and work that involve risk to personnel and/or the environment. This methodology depends on following established requirements, and conducting work/operations in an orderly and prescribed manner. Applying the formality and discipline of Conduct of Operations will enable Site employees to achieve enhanced safety, consistency, and excellence in operations and work. In a broad sense, COOP principles apply to all endeavors at the Site.

3. REQUIREMENTS DOCUMENTS

The managers of operations and support organizations apply the guidelines of DOE Order 5480.19 to their organizations using the graded approach. DOE Order 5480.19 directs the use of the graded approach to "assure that the depth of detail required and the magnitude of resources expended for operations are commensurate with each facility's programmatic importance and potential environmental, safety, and/or health impact."

4. OVERVIEW

4.1 BACKGROUND

COOP has been implemented using the graded approach in Site operations and support organizations. Facilities and applicable organizations use a Matrix of Applicability (Rocky Flats Graded Approach Matrix of Applicability) to indicate the applicability to the organization of each guideline of DOE Order 5480.19, and to list those directives which implement the guidelines. The matrix satisfies the requirement of the Order to assess and document applicability. Using the Applicability Matrices, and assessing compliance in their organizations against the graded approach criteria, Site managers have documented implementation of COOP requirements several times since 1991.

A matrix, showing the crosswalk between the DOE Order 5480.19 guidelines and the applicable sections of this Manual and other infrastructure documents, is included as Appendix 28. Appendix 29 contains the crosswalk of sections between Revision 0 and this revision of the Manual.

Maintaining adequate COOP compliance in facilities and organizations at the Site is not a static achievement. Continuing training and positive reinforcement by management are required to reap the benefits in safety and efficiency that derive from COOP, and to promote continuing improvement. In addition, the Rocky Flats Closure Contract for the consolidation and closure of Site facilities requires many facilities to change mission and operating status regularly. Some are removing major quantities of radioactive and hazardous materials, are ceasing ongoing operations, and are undertaking Decontamination and Decommissioning (D&D). Facility changes require managers to submit revisions to the applicability matrices for their organizations, often to reduce requirements as hazards decrease or as Authorization Basis (AB) requirements change.

Historically, the COOP Manual and other Site program requirements were developed in parallel in the early 1990s. One result is that some requirements of DOE Order 5480.19 were addressed in documents other than the COOP Manual, such as Lockout/Tagout (LO/TO) in the Occupational Safety & Industrial Hygiene Program Manual (OS&IH) and procedure requirements contained in the Site Document Requirements Manual (SDRM). Also, the Manual has included some subjects not addressed in the Order. The Plan of the Day (POD) and Pre-Evolution Briefings (PEB) are examples. The Manual also has contained requirements such as Compliance Tracking, appropriate for nuclear facilities, but not required by DOE Order 5480.19. For these reasons, the sections of the Manual do not match the topics of the chapters of the Order subject for subject. The Manual is designed for implementation on-the-floor as far as possible without additional implementing documents except where specified. Individual managers will continue to implement COOP requirements through Operations Orders and procedures appropriate to their needs. Project-specific COOP Manuals are neither required nor desired.

Because this Manual sets forth requirements for Site facilities and organizations with different missions and organizational structure, logical interpretations must often be made. For instance, where the Facility Manager's (FM) responsibility is described, organizations not having a FM interpret the title as "Facility Manager or equivalent line management." In some facilities this is the Operations Manager. Also, tasks or responsibilities assigned to positions such as Shift Manager (SM), Shift Technical Advisor (STA), or Project Chief Engineer must be assigned to appropriate personnel in organizations not having these positions or which use different terminology for an equivalent position. Managers of affected facilities are to assign the responsibilities to the appropriate positions using directives such as procedures, Operations Orders, or other documents. However, this is not required for the Configuration Control Authority (CCA). Many facilities have a CCA instead of a SM and the responsibilities in Section 5.7 apply to the CCA as well as to the SM. There are numerous references to the SM throughout the Manual. This is to be interpreted to mean the SM or CCA as applicable in a facility. Clearly defined responsibilities are essential for contributing to safe operations.

4.2 COOP IMPLEMENTATION

Since there will be continuing change as projects pursue closure of the Site, it is necessary for operations and support organizations to maintain their Matrix of Applicability current. Accordingly, operations and support organizations **SHALL** submit COOP Matrix of Applicability revisions to the K-H COOP Program Manager as major changes occur.

5. RESPONSIBILITIES

5.1 PRESIDENT, KAISER-HILL COMPANY, LLC (K-H)

- Approves Site Conduct of Operations policy.
- Maintains responsibility for overall operations at the Site.

5.2 K-H VICE PRESIDENTS AND PROJECT MANAGERS

- Develop requisite procedures and implement practices that comply with COOP requirements and policy.
- Ensure personnel are adequately trained on Conduct of Operations requirements as applicable to their areas of responsibility.
- Ensure that line management periodically assesses conduct of operations, and ensure that personnel are held accountable for compliance with the applicable requirements of this Manual.
- Ensure that operations organizations establish applicable safety, environmental and operating goals.

5.3 VICE PRESIDENT AND DIRECTOR, ENGINEERING, ENVIRONMENTAL, SAFETY & QUALITY PROGRAMS

- Sponsors the Site COOP Program through the Site Conduct of Operations Program Manager.

5.4 SITE CONDUCT OF OPERATIONS PROGRAM MANAGER

- Develops and maintains the Site Conduct of Operations Manual, and is the Site Conduct of Operations Program Manager.
- Oversees COOP implementation at the Site and keeps Department of Energy, Rocky Flats Field Office (DOE, RFFO) informed of major changes.
- Serves as Subject Matter Expert (SME) for COOP issues at the Site, and maintains documents required to manage the COOP Program.

5.5 LINE MANAGEMENT

- Is responsible for safety. This includes providing clear roles and responsibilities, setting expectations for performance, assuring competence is commensurate with the individuals' work responsibility, and ensuring that safety is top priority.
- Ensures that operations personnel are kept informed of activities and evolutions that may impact ongoing operations.
- Includes assessment of operating performance, where appropriate, in performance appraisals and promotion considerations for operations supervisors.
- Periodically assesses performance by direct observation of personnel performing operations activity, holds personnel accountable for performance, and takes action to correct deficiencies.
- Conducts counseling, training and, when necessary, takes disciplinary measures to promote personal accountability.

5.6 FACILITY MANAGER (FM)

- Manages facility operations to ensure accomplishment of the facility mission and goals.

8

- Ensures procedures are developed and implemented to operate the facility.
- Communicates new and/or revised procedures to assigned personnel.
- Develops implementation plans for new AB and changes to existing AB.
- Develops safety, environmental and operating goals for the facility and promulgates performance indicators for those goals, unless accomplished by the Project Manager.
- Approves the Plan of the Day (POD).
- Authorizes the maximum trainee-to-instructor ratio to be used in facility operations.
- Implements the facility Emergency Preparedness Program, per the Building Emergency Preparedness Programs Manual.
- Maintains authority over tenant organizations working in respective facilities for compliance with COOP requirements.

In some facilities, the Operations Manager (OM) has these responsibilities when a FM is not separately assigned.

5.7 SHIFT MANAGER (SM)

- Maintains control, authority, and responsibility for all activities occurring during the assigned shift. The SM is the operations authority on shift.
- Oversees compliance with AB requirements that includes being the authority for declaring suspension of operations, and AB violations.
- Authorizes commencement of activities scheduled on the POD. Notifies the FM if scheduled POD activities cannot be conducted, and notifies functional managers to shift personnel to other assignments if appropriate.
- Monitors performance of personnel performing work periodically and conducts facility tours once each shift or at a periodicity determined by the FM based on facility conditions.
- Ensures major activities and events occurring during the shift are documented in the SM log.
- Ensures the status and protection of Special Nuclear Material (SNM) during routine and emergency situations is in accordance with the Nuclear Materials Safeguards Manual requirements. Implements appropriate actions for facility emergencies including the notification of the Shift Superintendent, and acts as the Incident Commander until relieved.
- Categorizes events in the facility and reports per 1-D97-ADM-16.01.
- Delegates authority for routine operation of systems and equipment to Stationary Operating Engineers, operations personnel, and evolution supervisors. Personally controls complex operations or activities as required by the Facility Manager.
- Notifies the DOE Facility Representative of occurrences and items as indicated in other sections of the Manual.
- Ensures that facility status is maintained.
- Notifies the Central Alarm Station if it is necessary to penetrate a security barrier, including during maintenance, and makes notifications per the Security Manual in the event of a security event or a compromise of classified material.

In some facilities, the CCA has the above responsibilities.

5.8 SHIFT TECHNICAL ADVISOR (STA)

- Is assigned if required by the facility Authorization Basis.

- Provides technical information and assistance to the SM and on-shift personnel relative to facility Structures, Systems and Components (SSC), ongoing activities, and AB compliance.
- Supports facility management by providing an ongoing evaluation of compliance with the AB and conduct of operations requirements.
- Maintains cognizance of ongoing work, and regularly evaluates performance of personnel conducting operations, maintenance, surveillance, and other activities for adequate procedural compliance and adherence to safety requirements.
- Assists SM and/or Incident Commander during emergencies by providing technical information relative to the facility, and assists with event cause determination.

5.9 FIRST LINE SUPERVISORS AND MANAGERS

- Ensure, when starting work or operations, the hazards are understood, the required controls are utilized, the activity has been authorized on the POD, and SM permission to start has been obtained.
- Monitor progress of work regularly, and take appropriate action to ensure maximum production effectiveness and worker safety.
- Communicate performance expectations and standards through training and ongoing personal involvement in daily operations and activities, and provide feedback to subordinates to improve performance.
- Ensure assigned personnel are kept informed of activities and evolutions that may affect on going operations.

5.10 OPERATIONS AND SUPPORT PERSONNEL

- Ensure, when starting work or operations, the hazards are understood, the required controls are utilized, the activity has been authorized on the POD, and SM permission to start has been obtained.
- Ensure round sheets and logs are complete, accurately reflect the conditions observed and actions taken, and that tours and rounds are thorough and complete.
- Ensure deficiencies noted when conducting AB surveillances and operations are promptly reported to the SM.
- Observe activities and conditions in the work area and report problems, anomalies, upsets, and requirement noncompliances (including Site Safety Analysis Report (Site SAR) noncompliances) to the SM.
- Ensure responses to alarms and anomalies are accomplished as required by procedures, that they are documented, and that they are promptly reported to the SM.
- If assigned, monitor control panels/alarm panels for which responsible, and be attentive to indications and alarms.
- Operate equipment at their work station for which they are responsible.
- Take necessary immediate action in an emergency, without prior approval, in order to ensure personnel, facility, and environmental safety, and then report promptly to the SM.
- Ensure procedures with which they are working are current.

5.11 PERSONNEL ENTERING OPERATIONAL FACILITIES

- Check in with the SM, or equivalent operational authority, if a visitor.
- Check in with the SM, or equivalent operational authority, in order to obtain

permission to commence work.

- Meet the training requirements for access to nuclear facilities and Radiological Buffer Area/Material Access Area (RBA/MAA) as specified in the Training Program Manual, or be escorted.

6. COOP REQUIREMENTS

6.1 OPERATING POLICY

COOP is the foundation of the Site safety culture. It requires a personal commitment to maintain the highest standards of excellence. Safe operation begins with engineering design and organizational infrastructure that reflect defense-in-depth. Safe operation requires individuals to know relevant requirements, and to conduct work in a manner that reflects a safety-first approach to accomplishing the work. This is the desired cultural basis for the Site, starting with senior management commitment to safety and health and extending to all employees. It includes employees having a strong sense of ownership of the safety program, and for their own personal health and safety. Fundamental to this is for all personnel to conduct activities in accordance with established requirements and approved procedures. When conducting work and the unexpected occurs, *stop*, place the work site in a safe condition, and report the condition to supervision.

6.2 AUTHORIZATION BASIS (AB)

A nuclear facility Authorization Basis is the set of facility design basis and operational requirements relied upon by the Department of Energy (DOE) to authorize operation. For the complete definition, see the Nuclear Safety Manual. Compliance with the AB requires continuing adherence to provisions of the AB. Continuous vigilance by SMs and personnel conducting work which can impact AB requirements, such as maintenance, equipment operations, surveillances, etc., is needed to ensure that AB requirements are continually met. If compliance cannot be maintained, appropriate required actions are initiated as specified in the AB for the facility. Additionally:

- The SM **SHALL** notify the FM of any of the following:
 - Before intentionally entering an Out-of-Tolerance (OOT) condition,
 - After unplanned events create an OOT condition,
 - A condition exists that may affect AB compliance,
 - An activity is proposed which may be outside the AB,
 - An OOT condition is cleared.
- The SM **SHALL** determine operability status of Safety Class and Safety Significant Structures, Systems and Components (SSC) items in question, and take action in accordance with Section 6.6.7, and as specified in the AB for the facility. Safety Class and Safety Significant are defined in the Nuclear Safety Manual.
- The SM **SHALL** ensure that unplanned OOT conditions and AB violations are reported in accordance with 1-D97-ADM-16.01 requirements.
- The SM **SHALL** document AB suspensions of operations and AB violations.

6.3 WORK CONTROL

6.3.1 General Controls

- The Shift Manager **SHALL** authorize commencement of maintenance and other work activities, major process changes, major utility system changes, nonroutine operations, evolutions, tests, and experiments.

- The Facility Manager **SHALL** specify in an Operations Order or procedure those routine activities and minor process/utility system changes that can be performed without first informing the SM.
- All personnel **SHALL** notify the SM of changes in status of equipment and systems.
- Evolution Supervisors and Stationary Operating Engineers (SOEs) making minor process changes and minor utility system changes **SHALL** keep the SM promptly informed of the changes.

6.3.2 Plan of the Day (POD)

The POD is used to schedule, authorize, and control activities in the facility. It is an important forum for resolving conflicts in scheduling work, and providing for discussion about planned activities. Each facility **Should** plan and schedule work activities with about a 3 month horizon, refine the planning about a week in advance, and translate detail into the POD. The POD lists operations, maintenance, tests, surveillances, inspections, D&D and other activities authorized by the FM. The content of a typical POD is provided in Appendix 2. In order to maximize effectiveness of the POD for accurate planning, items **Should not** be scheduled on the POD until they are ready to be performed. The POD **Should** be held each workday unless scheduled less frequently by the FM, or held at the frequency specified in the facility AB. The FM approves the POD. Specific requirements are as follows:

- The POD **SHALL** be issued to cover all periods of operation in the facilities and areas it serves.
- The POD **SHALL** cover at least a 24-hour period in detail, and **Should** provide for a 7 day period for planning. A POD and a Plan of the Week **may** be used to satisfy this, or a POD covering seven days **may** be used.
- The POD **SHALL** indicate which items require a Pre-Evolution Briefing (PEB).

POD meetings are conducted to schedule and coordinate activities for the next day, or for an other period if held less frequently than daily, and to discuss upcoming work for about seven days. The meeting agenda **Should** include the following items as applicable:

- Discussion by the manager conducting the POD meeting of facility status (building availability for work, suspensions affecting work, major activities ongoing, etc.).
- Discussion of the nonroutinely conducted items scheduled on the POD.
- Discussion of impact of other work activities or other concurrent activities on operations and major maintenance or D&D items.
- Discussion of need for security escorts, or escorts for training.
- Discussion by attendees on items within their area of responsibility as necessary to achieve coordination and improved productivity.
- Discussion of upcoming activities which will impact scheduling of work, and resolution of potential conflicts.
- Allocation of critical and limited personnel resources.
- Discussion of how resources will be shifted when an activity is stopped/delayed in order to maximize use of resources throughout the day.
- Discussion of maintenance planned on security barriers.

The FM **SHALL** determine personnel required to attend the POD meeting. The FM **may** delegate control of the POD meeting to another manager.

The SM **SHALL** approve additions and other changes to the POD and maintain the master copy of the POD. The SM **SHALL** notify the FM if scheduled POD activities cannot be conducted, and **Should** notify functional managers to shift personnel to other assignments if appropriate.

Personnel desiring activities to be scheduled **Should** submit an Evolution Request Form or equivalent request with sufficient lead-time for inclusion of the evolution on the POD. (See Appendix 3.)

Personnel requesting nonroutinely conducted activities to be placed on the POD **Should** attend the POD meeting to provide information about the activities.

PODs **Should** be maintained on file for a year and then dispositioned per 1-V41-RM-001 as a non-record.

6.3.3 Pre-Evolution Briefings (PEBs) and Job Task Briefings (JTBs)

PEBs and JTBs are performed Site-wide to ensure that personnel preparing to conduct operations and other work understand what is to be performed; understand the hazards and controls; and have an opportunity to ask questions or raise concerns. The PEB is more formal and **SHALL** be conducted by the Evolution Supervisor for tests and experiments, new startups, operations and work activities that are complex, nonroutine or hazardous, and for deactivation, decommissioning and destruction/dismantlement work. It **SHALL** also be conducted for energized electrical work as defined in the Occupational Safety and Industrial Hygiene Program Manual (OS&IH Program Manual). A JTB is less formal than a PEB, is conducted by the foreman with the workers involved, and serves as one method by which the Integrated Safety Management System (ISMS) process is implemented on-the-floor for noncomplex, routine, and low hazard work activities. A PEB **SHALL** be documented; a JTB does not have to be documented. All PEBs and JTBs emphasize safety, procedural compliance, stop work authority, hazards, and controls.

6.3.3.1 Evolutions Requiring a PEB

The following, as applicable to the scheduled activities, **SHALL** be evaluated at the POD for having PEBs conducted consistent with Section 6.3.3:

- Radioactive decontamination.
- Maintenance on systems which contain radioactive material.
- Startup of all new processes.
- Conducting baseline activities.
- Experiments and tests.
- Work requiring special personal protective equipment (PPE).
- Shipment, transfer, or inventory of fissile materials. Shipment and transfer are defined in the Site Transportation Safety Manual.
- IWCP work packages which involve Safety Class or Safety Significant SSC, involve welding or cutting, or confined space work.
- Construction work.
- Facility decommissioning work, system deactivation, and demolition.
- Nonroutine work with chemicals.
- Nonroutine work with hazardous substances.
- Infrequently conducted operations, surveillances, maintenance, and preventive maintenance activities that operate equipment or systems, have hazards associated

with conducting the activity, or involve multiple trades and/or multiple subcontractor personnel who have not worked together frequently.

- Limiting Condition for Operation (LCO) surveillances conducted quarterly or less frequently.
- Recovery actions/reentry actions when recovering from an upset condition.
- Other items as required by the facility AB.
- Other items considered necessary by the FM or POD Manager.

For regularly occurring activities (e.g., nearly daily) which have become routine, the FM **may** elect to conduct one comprehensive PEB at the start of the week and then conduct shortened PEBs the remainder of the week. The shortened PEBs concentrate on hazards, controls, and recent problems or issues but still emphasize safety, procedural compliance, and stop work authority. Documentation requirements are the same, except only Parts A, B, C, 6, 8, 9, 17, 21, 23, 26, 28, 29, 34, and 35 of Appendix 4 need to be covered.

The SM or other designated manager **Should** attend PEBs for complex evolutions. This **may** be decided at the POD meetings.

6.3.3.2 Preparation for the PEB

The Evolution Supervisor prepares for the PEB as follows:

- For new evolutions or infrequently conducted evolutions, elicits information from Subject Matter Experts (SME) and others to obtain the benefit of the process which planned the evolution, and reviews lessons learned for similar work.
- Schedules the PEB on the POD, and coordinates with the SM to evaluate impact of the evolution on the AB, on other activities in the facility ongoing concurrently, and to evaluate ongoing activity impact on the planned evolution.
- Identifies resource support needed (Radiological Control Technician (RCT), Nuclear Material Control (NMC), security, etc.), and identifies the number of trainees to be involved.
- Verifies procedures to be used are current.
- Conducts walkdown prior to the evolution if not previously accomplished through dry runs and evolution training.
- Notifies participants of the PEB and evolution start times.
- Ensures Radiological Work Permits (RWPs) and other work permits will be in place, and that PRO-B19-NSM-03.12, if required, is scheduled and that the results will be reported to the Evolution Supervisor prior to activity start.
- Ensures appropriate personnel involved in the evolution have the necessary copies of procedures and/or work packages.
- Ensures all personnel involved in the evolution, including trainees, attend the PEB. This is especially important when multiple disciplines or subcontractors are involved. The Evolution Supervisor **may** brief selected individuals separately, if necessary.
- Uses Appendix 5, if applicable, in order to:
 - Identify and discuss hazards and hazardous materials associated with the evolution,
 - Identify and discuss potential "failure points" in the evolution that could result in the release of hazardous material. Failure points may include valves, test equipment connection points, gauges, hoses, tubing, etc.,
 - Identify controls for prevention/minimization of release, and for controlling

- hazards,
- Identify hazardous work situations (such as elevated work, working on electrical equipment, working in heat stress or cold stress environments, confined space entry), and appropriate safety precautions to minimize risk,
- Discuss pre-planned response to be taken in the event that an unplanned release or other emergency occurs.

The Evolution Supervisor **may** assign SMEs to cover their areas.

6.3.3.3 Conducting the PEB

The Evolution Supervisor conducts the PEB as follows:

- Ensures security and training escorts, if assigned, understand their responsibilities.
- Discusses limitations on trainees operating equipment and making log entries unless directly supervised by a qualified On-the-Job Training (OJT) instructor as required by the Training Program Manual.
- Ensures a sufficiently comprehensive briefing of the evolution is conducted, and that applicable items from Appendix 4 and from Appendix 5 are discussed. Hazards, controls, safety, procedural compliance and stop work authority are to receive emphasis. The Evolution Supervisor is responsible to decide which briefing record items are covered and which are not applicable. Items covered are initialed on Appendix 4.
- Briefs the evolution in sufficient detail to ensure all participants understand the evolution and their role. Covers work packages or procedures to the depth necessary to accomplish this.
- Briefs changes to the procedures or work packages relevant to the evolution that occurred since it was last conducted.
- Ensures understanding of the evolution by participants by asking open-ended questions regarding their roles and responsibilities, their knowledge of hazards and controls, and actions to take if problems or upset conditions occur.
- Documents the briefing using Appendix 4. Forwards Appendix 4, and Appendix 5 if applicable, for filing as determined by the FM, unless retained in an IWCP work package.
- Repeats the PEB when any of the following occur:
 - Shift change for multi-shift evolutions,
 - Personnel changes considered significant by the Evolution Supervisor or SM,
 - Evolution is stopped for more than 48 hours or stopped by a significant upset condition,
 - The scope of the evolution changes,
 - Intent changes are made to the procedures or work packages being used for the evolution.

Appendices 4 and 5 are to be retained for a year. After a year, they are dispositioned in accordance with 1-V41-RM-001 as a non-record.

6.3.3.4 Job Task Briefings

A JTB is a process in which the foreman personally interfaces with the workers as they are assigned work activities that do not require a PEB. The purpose of the JTB is to have the foreman discuss with the workers the hazards (industrial and others), the controls, the correct tools/equipment and techniques to be used, and procedural compliance and stop work authority. The JTB is not documented. JTBs **SHALL** be

conducted for all Site work activities that involve hazards. The foreman is to be satisfied that the hazards are recognized, that proper controls will be applied by the individual workers, and that the work will be conducted safely. Questions **Should** be asked by the foreman to confirm this understanding. JTBs are not required for office work, routine janitorial work, routine housekeeping, tours, inspections, and other work activities that clearly do not have industrial or other hazards associated with them. JTBs would be appropriate, for example, for lifting or moving heavy equipment that is not routine for the workers involved, and for lifting heavy items by individuals. JTBs are also held for additional activities as required by the FM or other responsible manager. Managers **Should** periodically observe JTBs to ensure their quality.

6.3.4 Temporary Modification (TM) Control

Temporary Modifications (TM) are changes thought to be of a temporary nature (less than six months) to Structures, Systems, and Components which are minor in scope and planned to be in place for a short period. They include electrical jumpers, lifted leads, pulled circuit boards, disabled alarms, mechanical jumpers/bypasses, temporary set-point changes, installation or removal of blank flanges, disabled relief or safety valves, installation or removal of filters or strainers, plugging of floor and other drains, temporary pipe supports, and items of a similar nature. Although planned to be temporary, TMs **may** stay in place indefinitely if considered appropriate by management based on such considerations as facility life, cost, or need.

Individuals desiring to make a temporary modification initiate the process by filling out an Integrated Work Control Program (IWCP) Work Control Form for work package development. TMs that are part of design packages are prepared according to 1-V51-COEM-DES-210, and the Site Engineering Requirements Manual (SERM). Accordingly, the IWCP/design package is processed, and the affected facility contacted to initiate the TM administrative process. TMs are administered by the affected facility. The requesting individual initiates action by filling in the Temporary Modification Request Form located in Appendix 6. The Project Chief Engineer determines the expiration date.

After the top section of the Temporary Modification Request Form is filled in, the TM is AB safety evaluated (in accordance with PRO-664-NSP-USQP which hereafter in this Manual will be referred to as AB safety evaluation) for nuclear facilities and nuclear activities, reviewed by the SM, concurred in by the Project Chief Engineer, and approved by the FM. The FM determines if training or procedure changes are necessary based on the type of TM. The applicable sections of the TM Log Sheet are filled in when ready to install the TM. Appendix 8 contains a TM Tag Sheet and instructions for preparation of a TM Tag Sheet and TM Tag. Appendix 10 shows a TM Tag. Tags are audited quarterly and the results entered in the TM Log Sheet.

TMs installed as part of Emergency Work (as defined in the IWCP Manual) are to be entered into the TM Log as soon as practicable.

Temporary changes resulting from a step in a surveillance or test procedure, and which are returned to normal in the surveillance or test procedure, are excluded from the requirements of this section. Similarly, changes which occur as a step in an operating procedure that are returned to normal in the operating procedure are excluded from the requirements of this section.

6.3.4.1 Temporary Modification Log

Each facility that installs temporary modifications **SHALL** maintain a Temporary

Modification Log in the SM office that includes:

- Active Temporary Modification Request Forms. (See Appendix 6.)
- Temporary Modification Log Sheet to maintain a current status of modifications. (See Appendix 7.)
- Temporary Modification Tag Sheets. (See Appendix 8.)
- Temporary Modification Extension Requests. (See Appendix 9.)

6.3.4.2 Temporary Modification Extensions and Closure

When the TM is being discontinued and closed out and the Temporary Modification Tag is being removed, the SM enters date and time of removal, and initials, in the Restored Section of the Temporary Modification Log Sheet, and moves the Temporary Modification Request Form, the Temporary Modification Tag Sheet, and Extension Requests for that TM to the back of the log where they are maintained for one year. After one year, disposition in accordance with 1-V41-RM-001 as a non-record.

The SM reviews the Temporary Modification Log as part of Shift Relief and Turnover.

Extension may be requested using the Temporary Modification Extension Request Form. (See Appendix 9.) They are AB safety evaluated for nuclear facilities and nuclear activities, concurred in by the Project Chief Engineer, and approved by the FM. The FM can approve indefinite extensions.

When an extension has been approved, the SM files the extension next to the request, and updates the Temporary Modification Log Sheet to reflect the new expiration date and the extension date by making a new line entry and lining out and initialing the old entry.

The Project Chief Engineer reviews the Temporary Modification Log quarterly. The review **Should** include:

- Tag audit results, and determining if TMs can be discontinued and closed out.
- Considering whether or not the age of TMs requires follow-on action.
- Determining which TMs need an extension.
- Initialing/dating the review on the next blank line of the Temporary Modification Log Sheet.

6.4 OPERATING PRACTICES

6.4.1 Access Controls

Access controls exist in facilities to ensure safety of visitors and workers, and compliance with security and training requirements. FMs determine and post access training requirements for their facilities. All Site managers **SHALL** ensure that employees for whom they are responsible meet facility entry requirements or have escorts if they are assigned work in facilities having access requirements. See the Training Program Manual (TPM) for additional information on access training requirements, visitor training requirements, and escort for training requirements. See the Security Manual for information on access security requirements.

6.4.1.1 Accountability Badges

Accountability badges are used to provide management with a method to identify personnel in a facility at any given time. By having accountability for every individual (including visitors) accessing the facility, managers can readily ascertain if the personnel

exited in an emergency. This can eliminate emergency response personnel conducting unnecessary searches. See the RFETS Emergency Plan (EPLAN-YR) for accountability badge requirements.

6.4.1.2 Access Requirements

There are standard training requirements listed in the TPM for unescorted access to nuclear facilities. Since there are changes periodically, the TPM must be consulted for the current requirements.

If a FM determines unique entry requirements based on hazards in his/her facility, the FM **SHALL** post those requirements. The FM **SHALL** communicate those requirements to personnel assigned to the facility, and to outside support personnel who perform work in the facility and their managers, so that workers can arrive for work meeting the requirements for entry.

The SM **SHALL** check that visitors (as defined in the TPM) are escorted when necessary in accordance with Section 5.11 requirements.

All Site managers **SHALL** ensure that the workers for whom they are responsible meet the access requirements, as applicable.

6.4.2 Shift Relief and Turnover

Formal shift relief and turnover **SHALL** be conducted for activities being conducted by multiple shifts (shift work). Examples include nuclear facility supervision and operations, steam plant operations, liquid waste operations, Stationary Operating Engineers, water and sewage treatment, radiological operations supervision, etc. Shift personnel retain full responsibility for their position until properly relieved. Shift relief and turnover is conducted by supervisors and individual operators, as appropriate to the activity/operation. For work crews conducting work on multiple shifts, a briefing for the oncoming crew by the supervisor may suffice if turnover between individuals is not considered necessary by the FM. A typical shift relief and turnover checklist for individuals and supervisors is provided in Appendix 11. The checklist **may** be modified to accommodate appropriate turnover information as necessary to conduct a thorough and complete relief. The checklist **Should** provide space for recording items discussed during turnover. The FM **SHALL** identify positions requiring shift relief and turnover, the content of shift relief and turnover checklists, and filing and review requirements. This **Should** be done in a procedure or Administrative Operations Order governing shift relief and turnover. Shift relief and turnover **Should** occur in the area of the work station. The need for oncoming crew briefings will be determined by the FM when circumstances dictate.

The following requirements apply to the conduct of shift relief and turnover:

- Off-going shift personnel **SHALL** not turn over responsibilities to oncoming personnel if it appears that the oncoming personnel are not capable of performing requirements of the shift. If an individual is identified who may be unfit for duty, the incumbent **SHALL** notify the SM and their supervisor to take appropriate actions, including referral to Occupational Medicine, in order to determine the fitness of personnel to assume responsibilities.
- The SM **SHALL** document actions taken resulting in removal of an employee from their position in the SM log.

- Personnel in the identified positions **SHALL** utilize a shift relief and turnover checklist to effect relief.
- Completion of turnover **SHALL** be documented in the narrative log for the position to signify transfer of responsibilities. An entry is made by both of the individuals. Acceptance of shift responsibilities may include taking custody of, and responsibility for, security keys, radios, and other equipment.
- Watchstanders **SHALL** refer to status displays and supporting documents such as logs, round sheets, POD, Night, Shift, Operations, and Standing Orders, appropriate for a thorough shift relief and turnover.
- Prior to initiation of shift relief and turnover, oncoming shift operations personnel **SHALL** review logs and round sheets, and other items specified by the FM back to when they were last on shift, or for five days (whichever is shorter), in order to become knowledgeable of current equipment and facility status. This also applies when there is no shift to relieve.
- Before, during, or shortly after shift turnover, the oncoming shift operations personnel **SHALL** perform a tour of assigned areas to observe equipment status and conditions. SM tour requirements are in Section 5.7.
- Unscheduled temporary reliefs occurring during the shift do not require use of a checklist. Operators in the identified positions **SHALL** discuss the elements of shift relief and turnover necessary to ensure that the relief is fully knowledgeable of conditions, and both make the required log entry.
- When operations are completed at the end of the shift and a follow-on shift will not be staffed, off-going shift personnel are to make closeout entries in applicable logs and round sheets.
- When SM shift relief and turnover has been completed, the oncoming SM communicates the SM acceptance of responsibilities and pertinent shift information to facility personnel. This **may** be done by Life Safety/Disaster Warning (LS/DW) announcement.
- Shift relief and turnover checklists are to be retained for one year in a location determined by the FM. After a year, they are dispositioned in accordance with 1-V41-RM-001 as a non-record.

6.4.3 Work Stations and Control Rooms

Work stations are established as necessary for operations and support personnel having on-shift responsibilities, and are equipped with, or have access to, necessary reference material including manuals, procedures, drawings, communication equipment, and office equipment. Access to control rooms which monitor equipment or systems is limited to persons with a need to be in the area. Control room boundaries **SHALL** be clearly marked, and permission to enter **Should** be granted by the responsible control room individual (such as Process Control Room Operator, SOE, etc.) or the supervisor. A professional and businesslike atmosphere conducive to safe and efficient operation is to be maintained in all control rooms. The following apply to work stations and control rooms:

- Operators who monitor equipment and system status are required to tour their areas of responsibility periodically and early enough in the shift to become aware of equipment status and unusual conditions. Tours **Should** be thorough and of all accessible areas for which responsible, and **SHALL** be conducted at least once a shift. During a tour, operating equipment **Should** be inspected, and a thorough inspection of the areas for safety and housekeeping conditions **Should** be

conducted.

- Supervisors/SM **SHALL** take action to preclude activities that may interfere with personnel conducting operations.
- The SM **SHALL** maintain an up-to-date list of selected personnel by name, title, pager, and work and home telephone numbers for notification and recall purposes.
- Operators **SHALL** be attentive and responsive to operating parameters. Those responsible for facility or process control panels **SHALL** be alert and attentive to the panel indications and alarms. They are to be monitored frequently and prompt action taken to determine the cause of, and to correct, abnormalities.
- Work distractions **SHALL** be prevented in order to maintain a professional work environment. Magazines, newspapers, radios, games, and other distractive items and activities not related to the job or facility operation are prohibited.
- Training materials, technical manuals, procedures, operator aids, or other materials that relate to operator responsibilities **may** be used at work stations as long as the operator's primary responsibilities are not compromised.
- Housekeeping **Should** be performed routinely as a part of work/maintenance.
- Operators, support personnel, and other personnel take appropriate action to correct and/or report deficiencies when found. Appropriate log or round sheet entries are made and corrective action taken including submittal of an Integrated Work Control Program (IWCP) Work Control Form, if applicable.

6.4.4 Abnormal Events and Emergencies

Personnel **SHALL** take appropriate emergency actions if there is an immediate threat to health, the facility, or the environment and **SHALL** report actions taken to the SM at the earliest possible time. In an emergency, operators **may** take whatever action is necessary to place the facility in a safe condition, and to protect equipment, personnel and public safety, and the environment.

If an abnormal condition is not an emergency, or if personnel on scene cannot take corrective actions, the condition **SHALL** be immediately reported to the SM who will coordinate control of the condition.

Circumstances, such as occurrences, conditions, or events that could have a negative impact on safety, **SHALL** receive appropriate response including identification, notification, categorization, investigation, evaluation, tracking, trending, and corrective action. Occurrences are categorized, and fact finding promptly conducted in accordance with 1-D97-ADM-16.01.

6.4.5 Procedure Use

Adherence to the requirements of the K-H Procedural Compliance Policy represents a firm commitment to disciplined and safe operations at the Site. Procedures contain written instructions to conduct operations, surveillances and tests, and to respond to abnormal or emergency situations or alarm conditions. Technical procedures prescribe precisely how to accomplish technical tasks associated with starting up, operating, testing, performing surveillances, and maintaining equipment and systems. Procedures are developed with sufficient detail to enable performance of the required tasks without direct supervision. They are to be written with sufficient detail depending on the complexity of the task, the experience and training of the operators, frequency of performance, and consequences of error. Employees are required to use and comply with applicable procedures. Procedures are to be developed so that:

- Content is technically correct, and the wording is clear and concise.
- They are written so that they can be performed as written, and they can easily be used without making mistakes.
- The sequence of procedural steps conforms to the normal or expected operational sequence.

For additional information about developing, maintaining and controlling procedures see PRO-815-DM-01.

All procedures **SHALL** be performed as written. For procedures designated Use Category 1 as defined in PRO-815-DM-01, the procedure **SHALL** be in the possession of the performer or a designated reader, and the steps performed as written in the sequence specified. For technical procedures that are not designated as Use Category 1, personnel **SHALL** have the procedure present and are to refer to the procedure frequently to ensure that the evolution is being performed as required by the procedure. There are some authorized exceptions. When performing surveillances or inspections involving only data collection and recording on round sheets or appendices, the parent procedure need not be carried. In these cases, equipment/systems are not being operated. When having a procedure present is impractical for radiological, confined space, or other applicable condition, the procedure can be in the possession of the supervisor or another individual on scene. In such cases, the supervisor decides how to proceed relative to having the procedure present.

For routine, repetitive, regularly conducted, non-complex, and low error consequence work governed by procedures (this does not apply to Use Category 1), the procedures are to be readily available and are to be referenced as needed to conduct the work properly. Examples include step-off pad equipment operations, drum movements, etc. For Alarm Response Procedures and Emergency Procedures, immediate actions are taken and the procedure is then opened and reviewed to ensure all steps/actions have been taken. For repetitive and routine activities such as driving forklifts and trucks, procedures do not have to be present since the personnel qualification process demonstrated capability to conduct such work. If during the course of work, questions arise about procedure use or presence for other than Use Category 1 procedures, the Shift Manager or equivalent operational authority resolves the question consistent with the requirements of this section and PRO-815-DM-01.

If in the course of using a procedure it is found deficient, it is to be promptly changed or revised in accordance with the requirements of PRO-815-DM-01. If a procedure step cannot or should not be performed as written, or if following the procedure will create an unsafe or noncompliant condition, the performing individual **SHALL** stop, place the component or system in a stable and safe condition, and immediately notify the evolution supervisor and the SM.

Operators may take whatever action is necessary during emergency conditions to place a facility in a safe condition, and protect equipment, personnel, and public safety without first administering a procedure change.

Operations procedures **SHALL** provide for component alignment checklists for startup. They **SHALL** also, where applicable, specify component positioning to accomplish both short-term and long-term shutdown. Component positioning to start up a system for the first time **SHALL** be accomplished by component lineup and verification. In this case, personnel conduct the two independent of each other. When performing a lineup to start up a system, the normal practice is to have the first individual position the components

as specified in the alignment checklist, unless the SM has directed otherwise due to operational considerations. The second individual verifies that the components are correctly aligned. Both initial the alignment checklist and the SM reviews and signs the checklist when completed. In the case where the SM directs that items not be positioned during the lineup, their position is verified instead. Component lineup and Independent Verification are discussed in Section 6.6.8, and verification techniques are in Appendix 26.

The FM ensures that procedures are prepared and used for operations, surveillances, tests, alarm response, and emergencies within assigned facilities. The FM **SHALL** have an administrative process established which will provide for training facility personnel about manual and procedure changes affecting facility personnel, and new manuals and procedures received in the facility which affect facility personnel. Managers responsible for controlling the use of procedures **SHALL** ensure the procedures are controlled to preclude the use of outdated copies.

6.4.6 Standing, Operations, Shift, and Night Orders

This Section establishes Standing Orders, Operations Orders, Shift Orders and Night Orders. Shift Orders, Night Orders, and Operations Orders satisfy the DOE Order 5480.19 requirement to provide timely information and instructions to operators. Standing Orders are documents that provide guidance or direction applicable Site-wide when rapid dissemination is considered necessary by senior management. Standing Orders **may** remain in effect indefinitely. They are to be reviewed annually by the Responsible Manager to determine if still applicable and current.

Operations Orders are either administrative or technical. Administrative Operations Orders **may** be effective for 36 months, and contain information about operations, administrative matters, work priorities, and matters of a similar nature. Administrative Operations Orders that contain information intended to be permanent **Should** be incorporated into procedures. Administrative Operations Orders are reviewed annually by the FM or designee. Technical Operations Orders **may** direct manipulation of systems or prescribe requirements that affect technical matters. They receive the same reviews as procedures and are developed meeting IWCP Manual requirements. Technical Operations Orders **may** be effective for 36 months and are to be reviewed annually by the FM or designee to determine if still applicable and current. Interim Technical Operations Orders **may** be effective for 60 days. Technical Operations Orders are not considered appropriate for conducting operational activities of a sustained nature. Instead, procedures and IWCP work packages are to be used, as applicable. They **may not** be used to modify or revise existing procedures.

Shift Orders **may** be effective for 30 days and are similar to Administrative Operations Orders in that they address the same kinds of topics, but they serve as a means for management to quickly communicate short-term information and administrative instructions to assigned personnel.

When promulgating Shift Orders and Operations Orders, the FM is responsible to provide for training or required reading for affected personnel, if necessary.

6.4.6.1 Standing Orders

Standing Orders are prepared using the format of Appendix 12 and are approved by the K-H President, or the Vice President of the applicable K-H support organization appropriate to the subject. The Site Conduct of Operations Program Manager assigns a

Principal Standing Order Administrator (PSOA). The PSOA identifies copy holders for Standing Orders. The Shift Superintendent will be one of the copy holders for Standing Orders.

When the need for promulgating a Standing Order has been identified, the Responsible Manager (RM) writes the Standing Order or designates the writer. RM responsibilities are contained in PRO-815-DM-01.

Standing Orders, which specify how technical requirements are met or affect the safety envelope of facilities and operations at the Site, require an Independent Safety Review (ISR). Accordingly, the Responsible Manager consults PRO-569-ADM-02.01 to determine if the Standing Order requires an ISR. If review is required, review evidence is to be maintained by the PSOA in the history file.

The Responsible Manager **SHALL**:

- Consult PRO-569-ADM-02.01, as necessary.
- Determine which organizations/individuals need to review the Standing Order prior to approval.
- Prepare document control forms in accordance with PRO-815-DM-01.
- Obtain the approval signature.
- Assign an effective date that accounts for distribution, training, and implementation, if necessary.
- Determine training and/or implementation actions, if necessary, and oversee necessary implementation actions.
- Assign an expiration date or enter "indefinite", as applicable.
- Provide a copy of the approved Standing Order to the PSOA for filing, and provide the approved Standing Order and document control forms to Document Control.
- If urgent distribution is necessary, the RM sends the Standing Order by e-mail to "Managers Preview" on the Site's Global Address List, and the Shift Superintendent sends the Standing Order Site-wide by facsimile or other method.
- Conduct the annual review and initiate cancellations, extensions and revisions as necessary. Revisions and extensions are prepared following the same steps for new Standing Orders. The RM obtains concurrence of the approval authority to cancel, and notifies the PSOA in writing. A memo or e-mail will suffice.

The Principal Standing Order Administrator **SHALL**:

- Maintain a Standing Orders Manual and Standing Orders History File (this is in addition to the file maintained in Document Control).
- Provide Standing Order sequential numbers.
- File a copy of Standing Orders and Table of Contents (TOC) in the Standing Orders History File.
- Prepare the revised Table of Contents.
- Verify distribution of the Standing Order through Document Control in accordance with PRO-815-DM-01.

The PSOA **Should** review Standing Orders quarterly to identify those Standing Orders soon to expire, and have the Responsible Managers determine if expiration, cancellation, or extension is appropriate. See Figure 6-1 for PSOA responsibilities when cancelling, revising or extending Standing Orders.

6.4.6.2 Operations Orders

Operations Orders are prepared using the format of Appendix 14. The Appendix 13 evaluation checklist is used to determine if the Order is Administrative or Technical, and to determine the organizations required to perform review of the Operations Order. Appropriate planning, activity screening, and hazard analyses are performed as required by the Integrated Work Control Program Manual when developing Technical Operations Orders. The Facility Manager responsibilities for Operations Orders are to:

- Designate a qualified staff member(s) to review proposed Interim Technical Operations Orders if reviewed by staff other than qualified SM, STA, or the Project Chief Engineer.
- Assign an Order Administrator (OA) to administer Operations Orders and the Operations Orders History file, and to determine copy holders.
- Approve all Operations Orders including extensions and cancellations. The SM **may** obtain telecon approval from the FM and **may** sign for the FM.
- Review Operations Orders annually to determine if the Orders are still applicable and current. A designee may be assigned this responsibility.

The responsibilities of the Responsible Manager (as defined in PRO-815-DM-01) for Operations Orders are to:

- Determine if the Operations Order is Administrative or Technical, and determine required organizations to perform review in accordance with Appendix 13 requirements.
- Prepare the Order using the Appendix 14 format and the requirements of the IWCP Manual as indicated above, and ensure that the Order can be performed as written.
- Review PRO-569-ADM-02.01 to determine if an ISR is required for the Operations Order. Submit for review, if required.
- Review PRO-664-NSP-USQP to determine if the Operations Order requires an AB safety evaluation. Submit for review if required.
- Enter the Category type, and for Operations Orders intended to be temporary, check Convert-to-Procedure on the Operations Order and enter date and assigned manager name; otherwise, mark N/A in the Date and Assigned Manager sections.
- List the groups/individuals required to read the Operations Order in the Required Reading line provided.
- Enter the Operations Order number and Revision number.
- Enter the Effective and Expiration dates.
- For a Technical Operations Order determined to be urgent such that it is to be implemented before the review cycle is completed, also mark the Operations Order Category as Interim on Appendices 13 and 14.

When it has been determined that an Administrative Operations Order is appropriate, the Responsible Manager requirements are to:

- Draft the Order and route for review, if applicable.
- Obtain FM approval and provide the Order to the OA for distribution.

When it has been determined that a Technical Operations Order is appropriate, the Responsible Manager responsibilities are to:

23

- Draft the Order and route for review in accordance with PRO-815-DM-01 requirements. Review **should** be completed within five working days.
- Resolve comments, make appropriate changes, and obtain FM approval.
- Provide review(s) results to the OA, and provide the Order to the OA for distribution.

When an urgent situation requires promulgation of an Interim Technical Operations Order, the Responsible Manager responsibilities are to:

***NOTE:** Situations requiring urgent action through an Interim Technical Operations Order to address concerns such as safety, criticality, safeguards, or security, require consultation with the appropriate disciplines as the Order is being written since the normal external review process is not being used before the Order is approved.*

- Draft the Order and route it to the qualified staff member, SM, STA, or Project Chief Engineer for review of technical content, including possible conflict with existing requirements, and for validation that the Order can be performed as written. List the organizations to review the Order in the Comments section of Appendix 13. The qualified staff member signs Appendix 13.
- Ensure the required consultation is conducted with organizations listed in Appendix 13 responsible for the areas affected by the Interim Technical Operations Order. The RM annotates that this was accomplished at the bottom of Appendix 13.
- Resolve comments as a result of consultation, obtain FM approval, and provide to the OA for distribution.
- Provide a copy of the Interim Technical Operations Order to the organizations required to review the Order listed in Appendix 13 within 24 hours of issue. Review **Should** be completed within 24 hours.
- Submit the Order for ISR and/or AB safety evaluation, as applicable, the next working day.
- Resolve any additional comments resulting from the reviews and revise the Order if necessary.

The responsibilities of the Order Administrator are to:

- Develop and maintain an Operations Orders History File.
- File a copy of Operations Orders, TOC, ISR/AB safety evaluation documents, and other reviews in the History File.
- Distribute Operations Orders and revised Table of Contents to copy holders.
- Review Operations Orders monthly to identify Operations Orders due to expire or due for conversion to procedure in the following month. Notify the FM to review for extension or cancellation. Notify the Assigned Manager of those needed for conversion. See Figure 6-1 for OA responsibilities when cancelling, revising or extending Operations Orders.

6.4.6.3 Shift Orders

The FM, SM, Operations Manager (OM) or other designated manager responsibilities are to:

- Maintain a Shift Order Notebook.
- Prepare a Shift Order using Appendix 15 or similar format and assign a Shift Order

number.

- Assign an effective date and an expiration date. They may be effective for 30 days.
- Obtain the FM's or Operations Manager's approval signature (telecon approval of the FM or OM may be obtained in which case the SM signs for the FM/OM).
- Distribute and/or post copies. Place in Required Reading, if appropriate.
- Review Shift Orders monthly to identify those about to expire and to determine those needing extension or cancellation.
- If necessary to revise, rewrite and reissue the Shift Order with a revision number.
- If cancelling, draw a diagonal line across the title page, label it CANCELLED, and have the OM or FM sign and date. Move cancelled Shift Orders to the back of the Shift Order Notebook for one year, after which they are dispositioned in accordance with 1-V41-RM-001 as a non-record.

6.4.6.4 Night Orders

Night Orders **may** be used by Facility Managers to communicate short-term information and administrative instructions to facility personnel. A bound logbook or a notebook **may** be used. The format is decided by the FM or OM. Night Orders are signed and dated by the FM or OM. They are normally effective for 24 hours, but can be written to cover weekend and holiday periods. They **may** be handwritten. Their administration and routing/distribution are determined by the FM or OM. Night Orders are maintained on file for a year, then dispositioned in accordance with 1-V41-RM-001 as a non-record.

6.4.6.5 Other Records

The following Quality Assurance Records are generated by this section. These Quality Assurance Records **SHALL** be maintained in accordance with 1-V41-RM-001, for two years:

- Standing Orders History File.
- Operations Orders History File.

After two years, disposition the records in accordance with 1-V41-RM-001.

**Figure 6-1
Cancellation, Revision and Extension of Standing and Operations Orders**

PSOA/OA RESPONSIBILITIES FOR ORDER CANCELLATION	
Standing Orders	Operations Orders
<ul style="list-style-type: none"> Obtain RM concurrence 	<ul style="list-style-type: none"> Submit marked copy to FM w/supporting documents as necessary
<ul style="list-style-type: none"> Update Standing Orders Manual Table of Contents (Manual TOC) 	<ul style="list-style-type: none"> Obtain FM approval
<ul style="list-style-type: none"> Provide revised Manual TOC to Document Control for distribution 	<ul style="list-style-type: none"> Revise Manual TOC
<ul style="list-style-type: none"> Place RM concurrence to cancel document in the history file, and place the TOC and cancelled Order in the history file 	<ul style="list-style-type: none"> Distribute revised TOC to copy holders
	<ul style="list-style-type: none"> Place cancelled copy and TOC in history file
PSOA/OA RESPONSIBILITIES FOR ORDER REVISION	
<ul style="list-style-type: none"> Obtain copy of the revised Order from RM 	<ul style="list-style-type: none"> Obtain a rewrite of the Order or correction from FM
	<ul style="list-style-type: none"> Prepare and issue Order
<ul style="list-style-type: none"> Revise Manual TOC 	<ul style="list-style-type: none"> Revise Manual TOC
<ul style="list-style-type: none"> Provide revised TOC and Order to Document Control for distribution 	<ul style="list-style-type: none"> Distribute TOC and revised Order to copy holders
<ul style="list-style-type: none"> Place revised Order copy and TOC copy in history file 	<ul style="list-style-type: none"> Place revised TOC and Order copy in history file
PSOA/OA RESPONSIBILITIES FOR ORDER EXTENSION	
<ul style="list-style-type: none"> Obtain copy of the extended Order from RM 	<ul style="list-style-type: none"> Identify need for extension to FM and obtain approval
	<ul style="list-style-type: none"> Annotate extension on front of Order and date
<ul style="list-style-type: none"> Revise Manual TOC 	<ul style="list-style-type: none"> Revise Manual TOC
<ul style="list-style-type: none"> Provide revised TOC and Order to Document Control for distribution 	<ul style="list-style-type: none"> Distribute TOC and extended Order to copy holders
<ul style="list-style-type: none"> Place extended Order copy and TOC copy in history file 	<ul style="list-style-type: none"> Place revised TOC, and extended Order copy in history file

6.4.7 Control and Use of Operator Aids

Operator Aids are postings that contain information that will assist personnel in performing their duties. Operator Aids **may** be pages or sections excerpted from procedures, system drawings, data tables, graphs, or other information. Where standard signs (such as radiological postings and signs provided in existing Site manuals, Criticality Safety Operating Limit (CSOL) and Nuclear Materials Safety Limit (NMSL) postings) are provided by other Site processes, they are not included in the Operator Aid controls described in this section. Operator Aids can be requested by anyone, are authorized by the SM, and are maintained current. They **SHALL NOT** alter or conflict with approved procedures, and are not to be used in lieu of procedures.

26

The SM **Should** ensure the following:

- Operator Aid postings do not obstruct instruments, panels, or equipment operations, and are securely fastened to the wall, door, or equipment.
- Operator Aid postings are protected by lamination or a clear plastic cover when possible.
- Postings are logged in the Operator Aid Posting Log which includes the sequential log number, posting information, location (list all locations), approval initials/date, and reference documents. A sample Operator Aid Posting Log is included in Appendix 16.
- When postings are removed, the removal is indicated in the Operator Aid Posting Log by drawing a line through the line entry for the posting. The SM initials/dates the line and enters the word "removed".

The SM responsibilities are to:

- Approve postings.
- Assign a staff individual to review the postings each quarter to confirm that the postings are still needed. The review is to include that the Operator Aids are still posted in accordance with the Operator Aid Posting Log. Operator Aids no longer needed **Should** be removed.
- Document that the review was conducted in the Operator Aid Posting Log (e.g., on the next blank line).

6.4.8 Communications

- Communications need to be reliable in providing accurate transmission of information for conducting operations activities. All personnel conducting operations activities **SHALL** communicate formally and use standardized terminology, including the Phonetic Alphabet, in order to achieve accurate exchange of information or direction. Communications need to be distinct, deliberate, clear, and concise.

6.4.8.1 Verbal Communications

When communicating verbally in an operational setting, the Phonetic Alphabet is used except when referencing a common acronym such as TSR, LCO, or RCT. The Phonetic Alphabet is included in Appendix 17, along with communications prowords. Operational verbal communications format includes information such as:

- Who is giving the direction.
- Who is to perform the action.
- What is to be done and why.
- When and where the action is to be done.
- What procedure to use, if applicable.

Personnel acknowledge directions in an operational setting by repeating back as necessary to ensure the originator's communication is correctly understood. The recipient asks the originator to repeat or rephrase unclear communications. The proword "say again", is used for this purpose.

If the recipient repeats or paraphrases the communication incorrectly, the originator immediately corrects the recipient by saying, "wrong", and then repeats the communication.

The originator of a communication giving direction **Should** observe indicators such as level and differential pressure to confirm that actions of the recipient were accomplished correctly, when this is possible.

In verbal communications, operators use the standard Phonetic Alphabet and prowords provided in Appendix 17. Words that might be mistaken for another, such as "increase/decrease" **Should** be avoided. "Raise/lower" would be clearer. Similarly, "affirmative/negative" would be used instead of "yes/no".

In radio communications, operators use the standard format, that is, call-up the recipient by name or title, identify the originator's name or title, and transmit the message. Note that once communications have been established, subsequent transmissions can eliminate call-up. Examples of proper communications are provided in Appendix 18.

6.4.8.2 Emergency Communications

When reporting emergencies:

- Clear a telephone line or radio channel for priority communications by using the phrase, *"silence on the line, this is an emergency."*
- Speak clearly, deliberately and distinctly.
- Identify who you are and your location/phone number.
- Describe the nature, severity, and location of the problem, for example:
 - Fire: is there flame/smoke? What is on fire? Where?,
 - Medical: is the patient conscious/breathing/bleeding/contaminated? Location of patient. Are there injured persons/fatalities?,
 - Criticality, Weapons, Security or other event: Identification of the problem, location and extent of incident,
 - HazMat: Name of chemical or hazardous material if known. Liquid? Gas? Quantity?
- Keep communication lines open.

6.4.8.3 Hand Signals

Hand signals are to be used only when the operating environment prohibits voice communication. Hand signals are used in accordance with accepted industry standards and are to be discussed and understood prior to task performance. Standard hand signals for several crane types are in ANSI/ASME B30, for example.

6.4.8.4 Life Safety/Disaster Warning (LS/DW) System

Facility Management **Should** minimize use of the Life Safety/Disaster Warning (LS/DW) System; use is by authorized personnel for emergency and other essential communications.

When necessary to work in areas where the LS/DW System or emergency alarms cannot be heard, alternate methods of communications are used such as beacons, strobes, vibrating pagers, radio headsets, or positioning persons where alarms are audible to communicate with those in the area without adequate coverage. In nuclear facilities, use of alternate methods must meet AB requirements.

6.4.8.5 Notifications

The FM **Should** provide the following notification guidance in an Administrative Operations Order or procedure:

- What events require notifications to be made.
- Who is responsible for making notifications.
- Identification of primary and alternate personnel to be notified for various situations (names, telephone numbers and pager numbers).
- Notification timeliness requirements.

6.4.9 Logs and Round Sheets

6.4.9.1 Logs - Description and Purpose

Narrative Logs are formal records of day-to-day operations, emergencies, and abnormal or unexpected events. Sufficient information should be recorded to aid in event reconstruction and cause determination. For consistency, logs are titled on the outside and have sequentially numbered pages. In order to promote completeness and accuracy, information **Should** be promptly and legibly recorded in logs. Logs are used to record the following types of information:

- Major events and activities.
- Major equipment and system status changes.
- Major system and equipment testing and surveillance.
- Personnel accidents and injuries.
- Initiation and completion of actions taken as a result of an abnormal condition.
- Reportable occurrences.
- Implementation of the Emergency Plan.
- Signatures of oncoming and off-going personnel documenting shift relief and turnover.
- Other items as required by the FM.
- Key Personnel notifications. (See Section 6.4.8.5.)

Computerized narrative logs **may** be used for making the necessary entries. In this case, the log **SHALL** be printed at end of shift and maintained in a binder that identifies the log title. This log printout **SHALL** be signed and dated at shift relief and turnover. (See Section 6.4.2.)

6.4.9.2 Round Sheets - Description and Purpose

Round sheets are used to collect data, record equipment status, and note unusual conditions. The FM of the organization responsible for the performance of the rounds **SHALL** approve the information to be included on the round sheet. Appendix 19 contains parts of a sample round sheet, and Appendix 20 lists typical items to inspect when conducting rounds. Round sheets include information such as the following where applicable:

- System or equipment name.
- Equipment listed in a logical order, such as the sequence encountered in a normal round.
- Component identification number, if necessary for accurate identification.
- Parameters observed such as voltage, current, pressure, temperature, and differential pressure.
- Equipment status such as Operating (ON), Standby (STBY.), Shutdown (OFF), Out of Service (OOS), or Out of Commission (OOC).
- Maximum, minimum, normal values, or expected readings of key parameters.

- A section to write comments for information gathered during the performance of the round. Comments **Should** include applicable items listed in Appendix 20, such as equipment vibration, excessive temperature, unusual noise or smell, and documentation of supervision notification when applicable.

6.4.9.3 Requirements for Logs and Round Sheets

The FM **SHALL** determine the specific logs and round sheets to be used in the facility. Logs used in the facility include narrative logs and administrative logs.

Site-wide, narrative logs are required for Shift Manager/CCA, Shift Technical Advisor, Stationary Operating Engineers, Radiological Operations supervision, and Control Room Operators.

Administrative logs include Lockout/Tagout Permit, Alarm Deactivation, Operator Aid Posting, and Temporary Modification.

The FM **SHALL** maintain an Operations Order or procedure listing the required logs and round sheets for the facility.

The FM specifies frequency of rounds. The minimum frequency is once a shift.

Prior to implementing the use of computerized narrative logs, the FM:

- Considers the handling and security of the recorded data.
- Establishes requirements for computerized narrative logkeeping consistent with those for manual logkeeping.
- Provides guidance for log corrections, late entries, and supervisory review.

Manual logkeeping requirements are:

- Entries are to be recorded promptly.
- Entries are to be complete and legible.
- Entries are to be consecutive.
- Late entries are to be annotated as such.
- Each calendar day is started on a new page.
- Entries are prefaced with the time in 24-hour time format.
- Entries are made in black or blue ink.

Round sheets and rounds requirements are:

- Round sheets are utilized shiftly as indicated in Section 6.4.9.2, and **SHALL** cover a 24-hour period.
- Round sheets in use **SHALL** be of the current revision.
- Entries are made in black or blue ink.
- Abnormal readings or out-of-specification readings are circled in red ink. These are explained in the Comments section, including action taken. Abnormal conditions for operating equipment are to be reported immediately to the Shift Manager.
- When performing rounds, an inspection of the assigned areas is conducted using Appendix 20 as a guide.

Log and round sheet errors are corrected by drawing a single line through the entry and initialing and dating. Correct information is then entered near the original entry, if possible. Correction fluid, correction tape or erasures are not to be used. When the

individual making an original entry is not available, management **may** correct logs and round sheets. The manager's name, title, signature, date, and time are entered accordingly.

Completed round sheets are retained for one year in a location determined by the FM. After a year, they are dispositioned in accordance with 1-V41-RM-001 as quality records. Completed logs are retained for two years in a location determined by the FM. After two years, they are dispositioned in accordance with 1-V41-RM-001 as quality records.

6.4.9.4 Log and Round Sheet Reviews

Operators returning from a period of absence review logs and round sheets as indicated in Section 6.4.2 on Shift Relief and Turnover.

The SM **SHALL** review SOE logs and round sheets and the Radiological Operations Supervisor log each shift, or at a periodicity determined by the FM.

Foremen **Should** review logs and round sheets each workday for the areas under their cognizance. Functional Managers (e.g., Utilities Manager, Operations Manager) **Should** review logs and round sheets for their areas at least weekly.

Log and round sheets are reviewed for unusual, abnormal, or unexpected conditions, and for trends and safety problems.

The reviewer documents review by entering name, title, signature, date, and time on the log page or round sheet remarks section.

6.4.10 Conduct of Operations Assessment and Lessons Learned

Assessment of performance is an integral part of making continual improvement. Management establishes performance goals and objectives that encourage continual improvement in performance, assesses performance, sets expectations and takes action to achieve performance goals and objectives. First line supervisors and other managers set expectations for their workers, assess performance, and provide feedback about performance relative to expectations.

COOP assessments (operations assessments) are a part of the assessment program at the Site. They contribute to an effective ISMS Program in which safety is enhanced through feedback and improvement. Improvements identified and taken as a result of objective assessment shape the scope of future work, can result in improved productivity, and can help shape controls for that work. Similarly, feeding back lessons learned from Site and Complex incidents is important to continuing improvement. COOP assessments are conducted by supervisors and staff personnel in order to directly observe operations activities on a frequent basis. They provide the FM and senior management with objective evaluation of operations practices, and they identify areas needing improvement, deficiencies, and noteworthy practices.

Development of Lessons Learned is in accordance with the Site Lessons Learned/Generic Implications Requirements Manual. Lessons Learned **Should** be distributed widely and used in training so that applicable employees obtain the benefit of Lessons Learned.

FM responsibilities for assessing Conduct of Operations are to:

- Identify maintenance, operations, surveillances and other subject areas that are to be included for assessment, to include periodic assessment of Pre-Evolution Briefings and Job Task Briefings.

- Develop a schedule of assessments.
- Personally assess Conduct of Operations regularly.
- Assign salaried personnel and first line supervisors to conduct assessments regularly.
- Ensure corrective action is taken for identified deficiencies.

Assigned personnel prepare for assessments by reviewing procedures and requirements related to the activities to be observed in order to understand the criteria against which to assess performance.

6.5 STAFFING AND TRAINING

6.5.1 Staff Requirements

Minimum staffing requirements for operations and support personnel are determined by the Project Manager as required by applicable facility AB and Project program plans. A long-range staffing plan that anticipates losses **Should** be maintained by the Project Manager.

6.5.2 Site Overtime and Total Hours Worked Limitations

This section applies to all personnel working overtime at the Site including those employed by more than one employer at the Site. It applies to those working for more than one employer in order to place limitations on the total hours worked by an individual. The purpose of having constraints on overtime and total hours worked by an individual is to enhance safety and to promote effective manpower utilization. Lack of sleep and excessive work without adequate rest can lead to inefficiency and accidents caused by fatigue. Management's intention is to preclude individuals from working excessive overtime, working excessive hours for multiple employers, and to preclude continuous work for a prolonged period without time off. The requirements and limitations of this section implement management's intention for overtime and total hours worked. The requirements of (1) and (2) below apply to both hourly and salaried personnel.

(1) Site Overtime Requirements

This section applies to all overtime worked at the Site. Sufficient resources (material and personnel) to accomplish tasks are to be provided so that excessive overtime is not required. When necessary to work overtime, it may be used on a temporary basis within the following requirements:

- An individual **SHALL NOT** be permitted to work more than 16 hours straight, excluding shift turnover time.
- An individual **SHALL NOT** be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, excluding shift turnover time.
- A break of at least eight hours **SHALL** be taken between work periods, including turnover time.
- The use of overtime **SHALL** be considered on an individual basis, and not for the entire staff on a shift, except that it may be granted to entire work crews involved in construction and D&D activities.
- Personnel **SHALL** have a minimum of one day off after working twenty consecutive days.

The Facility Manager or manager designated by contractor management, and equivalent line managers for other Site organizations, **SHALL** approve individual overtime for the purposes of this subsection. Other Managers may also have to approve overtime for budgetary considerations. Requirements for overtime compensation are in the K-H Team Human Resources Manual.

- Individuals working overtime, and their managers, are responsible for monitoring the nature and the amount of an individual's overtime in order not to exceed the requirements of this sub-section without the personal authorization of the Senior Executive (or designee) of the organization to which they are assigned to do work. Exceptions are: Overtime for Protective Force personnel **may** be authorized by the Shift Captain, and overtime for facility fire watches and Material Surveillance Teams (MST) **may** be authorized by the Facility Manager.

(2) Limitations on Total Hours Worked at the Site

This subsection applies to individuals who are employed at the Site by more than one employer. It places a limitation on the hours that can be worked by the affected individual in order to promote a safe work environment. The following requirements apply:

- An individual **SHALL NOT** be permitted to work more than 16 hours straight, excluding shift turnover time.
- An individual **SHALL NOT** be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, excluding shift turnover time.
- A break of at least 8 hours **SHALL** be taken after consecutive work periods for multiple employers, including turnover time.
- Personnel **SHALL** have a minimum of one day off after working twenty consecutive days.

Individuals working for more than one employer at the Site, and their managers, are responsible for monitoring the nature and amount an individual works in multiple employer situations in order not to exceed the requirements of this subsection without the personal authorization of the Senior Executive (or designee) of the organization to which they are primarily assigned to work.

6.5.3 Training Requirements

Trained and qualified personnel operate facility equipment or systems, except where directly supervised trainees operate equipment as part of on-shift training. Training programs include initial and continuing components and are established to develop, enhance, and verify the knowledge and skills of individuals. The TPM establishes requirements for implementing training and qualification programs at the Site. It includes requirements for on-shift training, and for trainees. The Training Implementation Matrix (TIM), required by DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, further defines program requirements in nuclear facilities and identifies positions and tasks requiring qualified or certified personnel.

6.5.4 Required Reading Program

A required reading file **SHALL** be established to ensure operations personnel are made aware of information that is:

- Important to safe and efficient operation of their work station.
- Important to facility safety.
- Applicable based on occurrences or lessons learned.
- Significant change to procedures or other documents affecting the facility, or systems or equipment operated by facility operations personnel.

The Required Reading Program is a requirement for the following personnel:

- Nuclear facility operations and supervision.
- Steam plant operations and supervision.
- Waste water and water treatment operations and supervision.
- Stationary Operating Engineers.

The required reading file contains:

- Significant procedure and other relevant document changes.
- Equipment design changes.
- Applicable DOE, industry, and Site occurrences and lessons learned.
- Information necessary to keep operations personnel aware of current facility activities.
- Other information determined by the FM/organization manager.

A required reading file **Should** be readily available.

Measures **Should** be established to assign required reading for groups of personnel appropriate to the organization, including:

- Required dates for completion of reading based on the nature of the material.
- An immediate reading designation for documents to be read before assuming responsibility for a shift position.

Documentation of required reading **Should** include:

- Initialing and dating by the assigned reader.
- Retaining documentation of required reading for a period determined by the FM/organization manager.

A required reading file periodic review **Should** be performed by the individual designated by the FM or organization manager to verify assigned reading is being completed, and to:

- Remove material that has been read by designated personnel from the required reading file. Such material is placed in a reference file for a period determined by the FM/organization manager.

6.6 CONTROLLING SYSTEM OPERABILITY

6.6.1 Status Control

Good operating practice includes operations personnel knowing the status of equipment and systems. Changes in major equipment and system operation/configuration need to be communicated shift to shift through shift relief and turnover and by maintaining accurate status, whether on status boards or computer displays. Maintaining accurate status is a key element of operations formality. Changes in equipment and component

status will occur regularly in facilities. Some will be related to placing items out of service for repair or placing them OOC. Others will be due to placing items back in service, and many will be due to system startup and shutdown.

System status displays are used as an accurate portrayal of major equipment and system status and as an aid for making operational decisions based on understanding current status. Status displays **SHALL** contain, as a minimum, the Safety Class and Safety Significant SSCs for which LCOs are specified in the AB, and **Should** contain other systems with defense-in-depth, regulatory, and personnel safety significance as determined by the FM. In facilities without Safety Class and Safety Significant SSCs, the FM determines the appropriate systems and equipment to be included on status displays. Facilities with operational breathing air systems and effluent monitoring systems **Should** have these systems included in status.

In establishing status displays, the FM promulgates an Administrative Operations Order or procedure that designates:

- Which status displays and which specific items are to be maintained based on the above.
- Status display locations.
- The type of the status displays (e.g., status boards or computer displays).

The SM and other personnel maintaining status **SHALL** ensure that displays are kept current.

For systems continually in operation, component alignment checklists are not maintained on file unless required by the FM. For systems being regularly started up and shutdown, the procedure used for the operation provides for startup prerequisite actions, and component positioning for both startup and shutdown. See Section 6.6.8.

6.6.2 Configuration Control

Configuration control is implemented Site-wide by the Configuration Change Control Program Manual.

6.6.3 Authorization Basis (AB) Surveillance and Compensatory Measure Tracking

This section describes the system to be used for tracking and documenting LCO and Administrative Control (AC) surveillances, and AB compliance-related compensatory measures or other actions associated with USQD, Engineering Operability Evaluations (EOE), and Justifications for Continued Operation (JCO). The system **may** be used to track other items as desired by facility management.

6.6.3.1 Compliance Tracking System

The FM designates a Compliance Tracking Coordinator (CTC).

The FM assigns a qualified individual (e.g., SM, STA, CCA, Project Chief Engineer) to periodically assess the Compliance Tracking System to ensure compliance. This **may** be accomplished as part of the facility/organization Management Assessment Program.

CTC responsibilities are to:

- Maintain the Compliance Tracking System accurate and continuously up-to-date. This includes tracking expiration dates of JCOs and other documents, and initiating action with the Project Chief Engineer, Nuclear Safety Manager, and FM in time to achieve extensions, if necessary.

- Report status to the SM and/or other managers at a periodicity designated by the FM.
- Update the Compliance Tracking System when changes are made to LCO and AC surveillance requirements or compensatory measures contained in an EOE, JCO, or USQ/USQD, and when a Compliance Tracking Form is received from the performing organization upon completion of a surveillance.

6.6.3.2 Scheduling of Surveillances or Compensatory Measures

The CTC **SHALL**:

- Enter performance intervals for compensatory measures and LCO and AC surveillances into the Compliance Tracking System.
- Track status of LCO surveillances, AC surveillances, and compensatory measures using the Compliance Tracking System.
- Establish due date/time for surveillances and compensatory measures and schedule performance of these accordingly.
- Ensure surveillances and compensatory measures are scheduled for timely accomplishment on the POD.
- Create Compliance Tracking Forms for surveillances and compensatory measures using Appendix 21 as a guide.
- Notify the SM, FM, and the manager of the performing organization if it appears an upcoming surveillance or compensatory measure may be missed.
- Immediately notify the SM, FM and other applicable managers of an overdue surveillance or compensatory measure.

The performing organization **SHALL**:

- Determine lead-time depending on workload and time required for performance, and schedule the surveillance/compensatory measure so it will be performed on time.
- Coordinate with CTCs for scheduling surveillances and compensatory measures on applicable PODs.

6.6.3.3 Compensatory Measure Actions

When an approved document (EOE, JCO, or USQ/USQD) with required actions or compensatory measures is received, the FM or SM **SHALL** take the following actions:

- Implement the actions formally. An Operations Order or procedure is recommended.
- Inform the CTC that the approved document requiring compensatory measures or required actions has been received and is being implemented. Review the document and the requirements with the CTC, and provide the CTC with a copy of the approved document.

The CTC **SHALL** notify the performing organization of their actions, and **SHALL** update the Compliance Tracking System by entering the following:

- Approved document and its reference number.
- Document by which implemented.
- Performing organization.
- Frequency of performance.
- Date compensatory measures or required actions are initiated.
- Next due date.

- Expiration date for the applicable documents and the implementing document.

6.6.3.4 Performance of Scheduled Surveillances and Compensatory Measures

The performing organization **SHALL**:

- Perform LCO and AC surveillances and compensatory measures on time as scheduled on the POD.
- Report completion of LCO and AC surveillances and compensatory measures to the SM as occurring.
- Use the Compliance Tracking Form to document the performance of LCO and AC surveillances or compensatory measures.
- Immediately notify the SM when problems or deficiencies are encountered, if LCO or AC surveillances or compensatory measures are not completed within the required time interval, or if acceptance criteria are not met.

The SM **SHALL**:

- Take the following actions when notified that an LCO or AC surveillance or compensatory measure is not performed within the required time interval, problems are encountered, or the acceptance criteria are not met:
 - Initiate required actions as required by the AB,
 - Notify FM,
 - Update System Status and the SM log,
 - Report the event in accordance with 1-D97-ADM-16.01, if required,
 - Notify the DOE Facility Representative.

6.6.3.5 Documentation and Tracking System Update

The performing organization **SHALL**:

- Upon completion of LCO and AC surveillances or compensatory measure actions, complete the Compliance Tracking Form and data sheet(s) generated during the surveillance/compensatory measure and promptly provide the form and original data sheets to the SM for review.

The SM **SHALL**:

- Review the Compliance Tracking Form and data sheets for completeness, and to determine if deficiencies were identified. Initiate actions if required by the AB based on the results.
- Sign the form and data sheets as indicated and provide them to the CTC.

The CTC **SHALL**:

- Review the Compliance Tracking Form for completeness and sign the form.
- Update the Compliance Tracking System to reflect the surveillance/compensatory measure performance.

6.6.3.6 Closure of EOE, JCO, and USQ/USQD Tracking

Facility Management responsibilities are to:

- Determine that operability has been restored, if applicable, and/or the condition for which the compensatory measure was indicated has been resolved.

- Notify the CTC that tracking can be discontinued upon closure.
- Notify the DOE Facility Representative.

The CTC **SHALL** update the Compliance Tracking System accordingly.

6.6.3.7 Records

Compliance Tracking Forms generated by this procedure are quality records.

The CTC:

- Maintains the original Compliance Tracking Form and data sheets for one year, except shiftly surveillances, which are kept for six months. For surveillances conducted less frequently than a year, maintains the previous surveillance on file.
- Dispositions the records in accordance with 1-V41-RM-001 accordingly.

6.6.4 Lockout/Tagout (LO/TO), Caution Tag, and Information Tag Requirements

The LO/TO Program provides administrative control to protect personnel from injury, protect equipment from damage, ensure operation of items only by authorized personnel in a controlled fashion when necessary, and to maintain integrity of physical boundaries of facility systems. LO/TO, Caution Tags, and Information Tags are administered in accordance with the Occupational Safety & Industrial Hygiene Program Manual.

6.6.5 Component Labeling

Clear labeling improves the ability of operations and support personnel to identify system components positively and quickly. Labeling is implemented using a graded approach as indicated below. Specification, design, and installation requirements for labels are contained in SX-164. Since the Site is in the process of closing, all systems and equipment will not be labeled. Labeling is necessary for the following:

- Startup of new systems or processes.
- Equipment or systems which are operated in order to conduct TSR surveillance procedures.
- Other systems and equipment if specified in the applicable AB.
- Other items as determined by the FM to enhance operations.

6.6.6 Removing Systems and Equipment from Service

Removal of systems and equipment from service is controlled in order to meet AB requirements, for personnel safety, to avoid unauthorized operation, and to avoid damage to systems and equipment. Systems may be removed from service for a number of reasons including maintenance, testing, calibration, and surveillances. They **may** be taken out of commission permanently to facilitate facility deactivation and/or shutdown as permitted by AB requirements and IWCP requirements.

SM responsibilities are to:

- Maintain Out of Service (OOS) and Out of Commission (OOC) status.
- Authorize changing status to OOS or OOC and physical removal of equipment considering the following:
 - Mechanical and electrical lineup changes needed to effect the status change,
 - Impact of systems or equipment on AB requirements,
 - Use of Lockout/Tagout to provide the appropriate degree of control,

- Documenting action taken in the SM log and other appropriate logs, and updating status.

Status of OOS and OOC items is maintained as determined by the FM. This **may** be annotated on status boards, status computer printouts, or on lists. When permanently shutting down entire systems, entire modules, entire rooms, etc., only one OOC entry is required for the system/module/room.

6.6.7 Operability, Justification for Continued Operation (JCO), and AB Violations

Compliance with the AB must be documented and continually demonstrated. This is fundamental for making operability determinations, managing planned OOTs, and entering or exiting required actions. It is an ongoing requirement for Shift Managers to be able to demonstrate that the facility meets AB requirements. Shift Managers **Should** have readily available the CTC status reports, Technical Concern Checklists, Engineering Operability Evaluations (EOE), and equipment/system status information to be able to demonstrate AB compliance.

If a situation arises which causes Safety Class or Safety Significant SSC operability to be questioned, determination of operability is accomplished using the operability determination process covered below. In the interval between discovery of a situation that causes operability to be questioned and subsequent resolution of operability status, the SM **Should** take a conservative approach. If the SM has reasonable expectation that the affected SSC is operable and a prompt operability determination will most likely support that expectation, the SM **may** choose to consider the SSC operable. In this case, Appendix 22 is submitted in order to have an EOE promptly conducted. If the SM is in doubt as to operability status, the SM declares the SSC inoperable and takes required action as required by the AB, pending technical resolution of operability status. (See Section 6.6.7.3.)

6.6.7.1 Justification for Continued Operation (JCO)

In the event that operations beyond those allowed by the Authorization Basis are necessary, a JCO is developed in accordance with the Nuclear Safety Manual. An approved JCO is implemented formally. A Technical Operations Order or procedure is recommended.

6.6.7.2 Planned Out-of-Tolerance (OOT) Conditions

Unless otherwise specified in a facility's AB, when performance of a planned activity such as maintenance or testing (except for TSR surveillances) will result in not complying with AB requirements, the SM:

- Implements the applicable required actions prior to initiating the activity and notifies the FM.
- Prior to the start of the activity, provides notification to the DOE Facility Representative of the nature of the activity, the systems affected, and the duration of the planned OOT.
- Enters in the SM Log:
 - Reason for the planned OOT,
 - The activity,
 - Items or areas affected and expected duration,
 - Time the OOT condition is entered and when returned to service.

The SM notifies the FM and the DOE Facility Representative when the OOT condition is cleared.

6.6.7.3 Operability Determination Process

When conditions, deficiencies, problems, or concerns are identified that call into question the operability of a Safety Class or Safety Significant SSC, the SM uses the Technical Concern Assessment Checklist (Appendix 22), to document the determination considering the following:

- Safety function of the affected system.
- Effect of the identified item on the identified safety function.
- Compliance with applicable provisions of the TSR or other AB requirements.

When it is clear to the SM that the item is operable, that is, questions C.1 through C.3 on Appendix 22 are answered "No", the SM:

- Documents the justification for this in Section E of Appendix 22, checks "No Action Required", signs and dates, and notifies the FM.
- Continues normal operations and makes the appropriate SM Log entry.

When it is not clear that the affected SSC is operable, that is, when any one of questions C.1 through C.3 on Appendix 22 are answered "Yes" or "Unknown", the SM:

- Declares the item inoperable unless there is reasonable expectation that it will be determined operable as discussed in Section 6.6.7, and checks Section D as appropriate.
- Initiates required actions if declared inoperable.
- Makes the appropriate log entry.
- Updates status if required.
- Forwards the Technical Concern Assessment Checklist to the Project Chief Engineer for follow-on action. If the Project Chief Engineer determines an EOE is necessary, processing is in accordance with PRO-393-SERM-EOE.

An inoperable item remains in that status until determined to be operable by EOE, or until returned to service in accordance with Section 6.6.7.6.

A file is to be maintained for Appendix 22 checklists and EOE's in the SM office.

6.6.7.4 Administration of AB Violations

The actions required in response to AB violations are specified in AB documents. If a violation occurs, the SM will take the required actions specified in the AB and:

- Document time and circumstances in the SM Log indicating what/when required actions were taken.
- Document suspension, if applicable, in a Technical Operations Order or other document.
- Notify on-shift personnel and the FM, and initiate fact finding in accordance with 1-D97-ADM-16.01.
- Notify the DOE Facility Representative.
- File an Occurrence Report in accordance with 1-D97-ADM-16.01.
- Update facility status.

When short-term corrective actions have been taken, and fact finding has occurred, a letter with Appendix 24 and a copy of the Occurrence Notification Report detailing the violation will be sent by the FM to the Project Manager responsible for the facility. The letter will report completion of the actions required by the AB for the violation.

Appendix 24 will state that ISR of the root cause was conducted, and that short-term corrective actions were accomplished.

The Project Manager will approve resumption by signing as indicated on the Appendix 24, and will inform the DOE Facility Representative. See Section 6.6.7.7 for record requirements.

6.6.7.5 Management of Discovery Issues

When information is identified which indicates that a discovery issue exists, the SM **SHALL**:

- Take action to place the facility in a safe condition as required by the AB.
- Initiate actions in accordance with PRO-638-NSP-DIM as applicable.
- Document the item in the SM Log.
- File the required occurrence report.
- Notify the DOE Facility Representative, the FM, and the Facility Nuclear Safety Manager of the situation.

6.6.7.6 Return to Service and Operability Declaration

This process is required for Safety Class and Safety Significant SSC and **may** be used for returning all SSC to service. It is used to return SSC to operable status or to achieve operability after modification or construction.

The SM **SHALL**:

- Verify satisfactory completion of the necessary work to regain operability such as a Post-Maintenance Test (PMT) in accordance with provisions of the IWCP Manual, and/or completion of applicable TSR surveillances.
- Complete the applicable sections of the Return-to-Service and Operability Checklist. (See Appendix 23.)

The FM "noting" return-to-service and/or operability on Appendix 23 **may** be obtained verbally in which case the SM signs Appendix 23 for the FM.

6.6.7.7 Records

The FM maintains the following on file for two years in accordance with 1-V41-RM-001:

- Appendix 22, Technical Concern Assessment Checklist.
- Appendix 23, Return-to-Service and Operability Checklist.

After two years, disposition these records in accordance with 1-V41-RM-001 requirements as non-records.

Each K-H Project Manager of nuclear facilities establishes files in accordance with 1-V41-RM-001 and maintains the original Appendix 24, required in Section 6.6.7.4 associated with violations, for two years. After two years these are dispositioned in accordance with 1-V41-RM-001 as quality records.

6.6.8 Component Lineups and Independent Verification (IV)

Conducting component lineups are fundamental for establishing system status. This section applies to lining-up valves, switches, components, circuit breakers, and equipment necessary for proper operation, and for conducting Independent Verification (IV).

The initial startup of systems and equipment are conducted after lineup has been performed to ensure the required positions of valves, switches, components, circuit breakers, and equipment have been established.

The guidance provided in this Section and the techniques described in Appendix 26 are used when conducting component lineups and IV. For many systems, performance of a lineup by a single individual is sufficient, but for those components where mispositioning could create an unsafe condition, or result in release of radioactive or hazardous material to the environment, a second individual verifies positions are correct. The second individual is accomplishing IV in this case. In addition, IV can be performed as a stand-alone activity when desired.

Component Alignment Checklists are not quality records.

6.6.8.1 Preparations for Component Lineup and Independent Verification

The SM responsibilities are to:

- Ensure personnel assigned are qualified operators.

NOTE: *Qualified operators perform lineups and IV. These are Process Specialists (PS), Stationary Operating Engineers (SOE), personnel responsible for operating fire suppression systems, and others designated by the FM. Personnel who are qualified to operate the system in question (e.g., PS qualified in Caustic Waste Treatment System operations in Building 371), are qualified to conduct lineups.*

- Specify lineups and/or IV to be performed in accordance with the approved procedure or Technical Operations Order. Alignment Checklists are based on the example in Appendix 25.
- Authorize and document the use of alternate means of conducting lineups and/or IV, such as observing process parameters, when excessive radiation exposure or other safety considerations apply. Documentation is satisfied by the SM annotating the Alignment Checklist accordingly.

6.6.8.2 Conducting Component Lineup

An Alignment Checklist based on Appendix 25 is used for performing lineups and is included in the procedure being performed.

Lineups are conducted according to the following:

- With permission of the SM, the Evolution Supervisor directs the lineup to commence by verbally authorizing the workers to start.
- Operators use techniques described in Appendix 26 when verifying position of components.
- First operator (Positioner/First Checker) checks the positions of the components. If a component position is as indicated in the Required Position column of the Alignment Checklist, that position is entered in the Actual Position column and the operator initials in the Positioner/First Checker column. If a component position is not as

indicated in the Required Position column of the Alignment Checklist the operator repositions the component to the Required Position, unless otherwise directed previously by the SM. The operator then enters that position in the Actual Position column and initials in the Positioner/First Checker column.

- Second operator (if required by the FM to have the independent second check for the system undergoing lineup) independently verifies component is positioned as indicated in the Required Position section of the Alignment Checklist and initials in the Second Checker column for each item listed.
- Operators ensure that the checks result in positive identification of the component, and actual determination of position or condition. This may require ladders or other means to gain access to remotely located items.
- Operators verify that locking devices are correctly installed if called for, installed on the correct component, and that the component is in the required position.
- Operators identify deficiencies such as incorrect or inadequate labels, labels that are missing, worn, or illegible, components mispositioned, or locking devices/tag or other deficiencies, and inform the SM so that corrective action can be taken.
- Operators take the following actions as deficiencies are identified:
 - Immediately notify SM, and
 - Enter deficiency in the DEFICIENCIES Section of the Alignment Checklist.
- SM evaluates the deficiency and directs corrective action, which is entered in the Corrective Action block.
- Operator takes the corrective action and initials in the Complete/Initials Section.
- Upon completion, Positioner/First Checker (and Second Checker if two are used) sign the checklist indicating completion (time, date) of the lineup and return the checklist to the SM for SM review.
- SM reviews and signs the checklist, and retains a copy of checklists for initial startup alignments in a file as required by the FM. Alignment Checklists for IWCP work packages and surveillances need not be retained by the SM.

6.6.8.3 Independent Verification

IV provides for checking a component's position independent of the lineup done to establish the component's position. It is one method of confirming status. Verification checks for conformance with the required position criteria; it does not alter the status of equipment or the position of components. For example, verification checks that a valve or switch is in the correct position, that is, the initial lineup was accomplished correctly.

Independent means that the individual performing the verification will not be influenced by observation of, or involvement in, the initial lineup that established the component position. For most operational activities, independence is achieved by separating the initial lineup and the verification by time and distance. This means that the verifier does not accompany the individual performing the initial lineup.

The purpose of performing independent verification is to provide a high degree of confidence in the positions of valves, switches, circuit breakers, and other components in systems which have the potential to adversely affect personnel safety or the environment, or adversely affect system operation. The application of IV at the Site is most appropriate for new startup activities to ensure component positions are verified correct before initial operations. For systems being operated continuously, IV could be conducted upon completion of maintenance as required by the FM. It might also be used for periodic checks on systems such as fire suppression systems and breathing air

systems to periodically affirm proper lineup.

The following are guidelines for FM consideration for determining when to employ Independent Verification:

- Components where an inappropriate positioning could have a serious adverse affect on system operation.
- Radioactively contaminated systems where inappropriate positioning could result in radioactive material release to the environment.
- Systems necessary to provide life support to personnel (e.g., breathing air).
- Systems that could release hazardous materials or energy where personnel and significant equipment safety are concerned (e.g., steam plant safety relief valves).
- Systems required to monitor environmental data required by law, permit, or consent order (e.g., effluent monitors.)

The FM **SHALL** establish in an Operations Order or procedure the equipment and systems to be subjected to Independent Verification in the facility, and the circumstances for which IV is to be accomplished.

6.6.9 Response to Indications

Personnel need to act as though indications displayed by instruments, charts, printouts, valve position indications, and alarms are accurate and **SHALL** respond accordingly until the indications are proven to be inaccurate. In other words, operators **Should** "believe their indications".

When there is doubt concerning the accuracy of an indication, personnel **SHALL** take the following actions:

- Notify SM immediately of the suspect indication and annotate the applicable log or round sheet accordingly.
- Compare, if possible, the information that is being displayed by the suspect device to another device monitoring the same parameter.
- Initiate investigation of the suspect device.

If the indication is proven to be inaccurate, the responsible manager and the SM **SHALL** take the following actions:

- Review impact of the deficient device on AB compliance.
- Ensure the deficient device is appropriately identified (log and/or round sheet entries, LO/TO, status updates, etc.), and initiate corrective actions.
- Take appropriate actions required for the deficient device.

6.6.10 Response to Alarms

Alarms are warning features to inform operations personnel of conditions not within normal parameters. Alarms may be grouped together in control areas or might be located remotely throughout the facility. Alarm actuation normally requires prompt response from operations or support personnel to maintain or restore safe operating conditions. Operators treat all alarms as accurate and respond accordingly.

Operators **SHALL** respond to alarms as follows:

- Perform actions specified by the Alarm Response Procedure, if applicable.
- Take action to place the facility in a safe condition and to protect equipment,

- personnel, and the environment.
- Notify the SM and other supervisors such as evolution supervisors of abnormal and unexpected alarms.
- Scan for other actuated alarms; evaluate interrelationships between the alarming indications, other facility parameters, and system operating status.
- Take appropriate actions to monitor equipment for abnormal conditions.
- Document receipt of alarm and the actions taken in the operator's log.
- Notify other managers having cognizance of the system of abnormal and unexpected alarms after immediate actions have been taken and the condition is stabilized.
- Where applicable, record abnormal and unexpected alarms on system status displays.

The SM **SHALL** determine impact on the AB and take action as required by the AB.

6.6.11 Nuisance Alarms

Occasionally, conditions occur that causes an alarm to be actuated repeatedly for a condition that is understood by operations personnel. These alarms are referred to as nuisance alarms, and may result from parameter oscillations near the alarm set point, faulty equipment, or performance of maintenance on associated equipment. Nuisance alarms are undesirable operator distractions and can mask actual alarms.

Operators **SHALL** report nuisance alarms to the SM.

The SM or manager responsible for the system with the nuisance alarm **SHALL** ensure actions are initiated to correct the nuisance alarm.

The SM **may** authorize alarm deactivation, if applicable, in accordance with Section 6.6.12.

6.6.12 Controlled Deactivation of Alarms

Formal deactivation of alarms may be required for a variety of reasons, including equipment failure, damage, or extended maintenance. Deactivation of alarms is performed to silence nuisance alarms, or alarms which might be locked in for extended periods of time. This Section is applicable to nuisance and other failed alarms due to system/equipment malfunction, or is deactivated due to maintenance. This Section does not apply to:

- Expected alarms that occur due to normal cycling of equipment by operators (e.g., monthly fan rotation).
- Deactivation which results from conducting an approved procedure such as a surveillance which includes returning the alarmed item to service.

Operations, maintenance, or engineering personnel needing to deactivate an alarm **SHALL** initiate alarm deactivation by completing the Originator section of Appendix 27, and **SHALL** obtain concurrence signatures as indicated in the Deactivation section.

If the alarm is on a Safety Class or Safety Significant SSC the SM responsibilities are to:

- Ensure an AB safety evaluation is conducted for alarm deactivation and attach a copy to the Alarm Deactivation Request (ADR).
- Ensure any required actions for alarm deactivation have been determined and implemented.

For all deactivations, the SM responsibilities are to:

- Assign ADR number, and record the number on the ADR.
- Approve ADR. This occurs after obtaining the FM verbal concurrence in the case of Safety Class and Safety Significant SSC.
- Authorize alarm deactivation when the following conditions are met:
 - Required concurrence and approval signatures are obtained and required actions are implemented in accordance with AB requirements,
 - Lockout/Tagout is installed if required.
- Authorize personnel to deactivate the alarm and complete the Deactivation section of Appendix 27.
- Make a SM Log entry when an alarm is deactivated and update facility status.
- Enter ADR in a Deactivated Alarm notebook that **may** be the log of ADRs. The notebook **Should** include sections for Open ADRs and Closed ADRs. Closed ADRs will be kept in the notebook for a year and then dispositioned in accordance with 1-V41-RM-001 as a non-record.

The FM responsibilities are to have a monthly review of the Deactivated Alarm Log and associated ADRs performed, and deficiencies entered in the front of the Deactivated Alarm Log with the reviewer's name, signature, and date of review. The log is to contain a sheet in the front to record reviews and any identified deficiencies. The FM designates personnel to conduct the review if other than SM, STA, or the Project Chief Engineer.

When the Responsible Manager reports that the item is ready for reactivation, the SM authorizes reactivation and ADR closure.

Assigned personnel reactivate the alarm. The SM completes the Reactivation section of Appendix 27 and moves the ADR to the Closed ADR section of the log. The SM makes a SM Log entry when an alarm is activated, and updates facility status.

6.6.13 Resetting Protective Devices

When a protective device such as a circuit breaker or fuse trips or fails, operations and support personnel responsibilities are to:

- Inform the SM.
- Attempt to determine the cause of the trip.
- If directed by the SM, the device **may** be reset one time. A protective device is not reset a second time unless the cause of the trip is understood and corrected, and has been authorized by the Shift Manager.

Document actions taken in the SM Log or the SOE Log as appropriate.

7. RECORDS

7.1 DOCUMENTS DERIVED FROM THIS MANUAL

Other documents, including standards, lower level procedures, and instructions related to COOP **SHALL** be consistent with the requirements of this Manual. In cases where this Manual provides sufficiently detailed information and direction, as concurred with by the Site Conduct of Operations Program Manager, procedures and instructions **may** incorporate such information by reference to this Manual.

7.2 MAINTENANCE OF THIS MANUAL

The Site Conduct of Operations Program Manager **SHALL** be responsible for the maintenance of this Manual. The Manual **SHALL** be reviewed for required significant upgrade at a minimum of a four-year period. The Manual **SHALL** be reviewed annually to determine if less significant changes need to be promulgated.

7.3 RECORD PROCESSING

The records generated by this Program **SHALL** be identified, prepared, maintained, and preserved as required quality records. In addition, any records that are "records which furnish documentary evidence of the quality of activities affecting quality" **SHALL** be prepared and maintained to meet the requirements of procedure 1-V41-RM-001.

The following records are initiated, processed or maintained as a result of this Manual:

RECORD IDENTIFICATION	RECORD TYPE DETERMINATION	PROTECTION/STORAGE METHODS	PROCESSING INSTRUCTIONS
Standing Orders History File	In Process QA Documents	Filed by the PSOA and Site Document Control at a reasonable level of protection	Transfer to Site Records Management (SRM) in accordance with 1-V41-RM-001 after 2 years
Operations Orders History File	In Process QA Documents	Filed by the OA at a reasonable level of protection	Transfer to SRM in accordance with 1-V41-RM-001 after 2 years
Round Sheets	In Process QA Documents	Filed at a reasonable level of protection	Transfer to SRM in accordance with 1-V41-RM-001 after a year
Logs	In Process QA Documents	Filed at a reasonable level of protection	Transfer to SRM in accordance with 1-V41-RM-001 after 2 years
Appendix 24	In Process QA Documents	Filed by Project Manager at a reasonable level of protection	Transfer to SRM in accordance with 1-V41-RM-001 after 2 years
Compliance Tracking Forms	In Process QA Documents	Filed by the CTC at a reasonable level of protection	Transfer to SRM in accordance with 1-V41-RM-001 as indicated in Section 6.6.3.7

8. REFERENCES

DOE Orders

DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities.*

DOE Order 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities.*

Other DOE and Industry Guidance

ANSI/ASME B30.

Tech 15, *Defense Nuclear Facilities Safety Board Technical Report, Operational Formality of DOE Nuclear Facilities and Activities.*

Site and K-H Policy, Directives and Manuals

Kaiser-Hill Team Human Resources Manual.

MAN-001-SDRM, *Site Document Requirements Manual.*

MAN-027-SERM, *Site Engineering Requirements Manual.*

1-MAN-013-SIOM, *Site Integrated Oversight Manual.*

1-MAN-010-NMS, *Nuclear Materials Safeguards Manual.*

MAN-020-BEPPM, *Building Emergency Preparedness Programs Manual.*

MAN-094-TPM, *Training Program Manual.*

1-MAN-018-NSM, *Nuclear Safety Manual.*

1-MAN-017-LLGI-RM, *Site Lessons Learned/Generic Implications Requirements Manual.*

MAN-102-SRCM, *Radiological Control Manual.*

MAN-062-CAUSEANALYSIS, *Cause Analysis Requirements Manual.*

MAN-072-OS&IH PM, *Occupational Safety & Industrial Hygiene Program Manual.*

MAN-071-IWCP, *Integrated Work Control Program Manual.*

MAN-T91-STSM-001, *Site Transportation Safety Manual.*

MAN-128-CCCP-1.0, *Site Configuration Control Description.*

1-MAN-026, *Security Manual.*

Rocky Flats Environmental Technology Site Safety Analysis Report (Site SAR).

EPLAN-YR, *Rocky Flats Environmental Technology Site Emergency Plan.*

Site Procedures

1-D97-ADM-16.01, *Occurrence Reporting Process.*

1-V51-COEM-DES-210, *Site Engineering Process Procedure.*

PRO-B19-NSM-03.12, *Administrative Criticality Safety Control Compliance.*

PRO-393-SERM-EOE, *Engineering Operability Evaluation Report Process.*

1-A35-5500-12.01, *Scheduling and Conducting Building Emergency Drills.*

1-V41-RM-001, *Records Management Guidance for Records Sources.*

PRO-569-ADM-02.01, *Independent Safety Review Requirements.*

1-R26-NSM-04.06, *Justification for Continued Operation (JCO) Preparation.*

PRO-664-NSP-USQP, *Nuclear Safety Program Unreviewed Safety Question Process*

PRO-815-DM-01, *Developing, Maintaining, and Controlling Documents.*

PRO-638-NSP-DIM, *Nuclear Safety Program Discovery Issues Management.*

Site Standards

SX-164, *Plant System and Component Identification and Labeling.*

Other

Rocky Flats Closure Contract between Kaiser-Hill Company, LLC and the United States Department of Energy, Contract No. AC34-00RFO1904.

9. APPENDICES

APPENDIX 1

DEFINITIONS AND ACRONYMS

(Page 1 of 4)

1.1 SHALL, Should and May Statements

The word **SHALL** identifies those requirements or actions that are considered mandatory, unless prior written justification and approval of an alternate approach is obtained from the Site Conduct of Operations Program Manager. The word **Should** indicates a recommendation that is based on standards and good safety and business practices. The word **may** indicates when permission is granted, but the action is neither a recommendation nor a requirement. **May** statements often provide a suggested or possible course of action when a consistent methodology is not required. For emphasis, these terms appear in boldface throughout this Manual.

1.2 Definitions

These definitions **Should** be used in the development of procedures that provide instructions to carry out the requirements of this Manual.

Alarm Deactivation. Action resulting in a change or modification in the signal (audibility, light, or indicator) received or transmitted to alert an operator that the system is dysfunctional.

Evolution. Any activity or event performed by Site personnel that must be planned and scheduled to ensure that all health, safety, and environmental attributes associated with the activity or event have been identified and addressed.

Evolution Supervisor. This person is the direct supervisor of personnel conducting an evolution. The individual with the responsibility to organize and prepare for an evolution. The individual who conducts the Pre-Evolution Briefing.

Independent Verification. The act of checking a condition, such as a component position, separately from activities related to establishing the condition or the component's position.

Operable or Operability. A system, subsystem, component or device is operable when it is capable of performing its intended safety function. See individual Authorization Bases for additional details.

Operations. The conduct of activities related to the mission or function of a structural facility or geographic area, including maintenance and technical support services.

Operations Order. A document that communicates instructions or directions from the Facility Manager to operations, support, and other personnel. Operations Orders **may** contain instructions and direction of a technical and/or administrative nature.

- **Administrative Operations Order.** An Operations Order that contains only administrative items based on an evaluation performed in accordance with the Operations Order Evaluation Checklist. Although an Administrative Operations Order **may** have technical content, it remains only administrative in nature and does

APPENDIX 1

DEFINITIONS AND ACRONYMS

(Page 2 of 4)

not allow for performance of physical work (such as valve and equipment operations or electrical lineups).

- **Technical Operations Order.** An Operations Order that has technical content based on an evaluation performed in accordance with the Operations Order Evaluation Checklist. Technical Operations Orders require review, and meet IWCP Manual requirements when being developed.
- **Interim Operations Order.** A Technical Operations Order issued by the Facility Manager before all of the reviews are completed. The urgency of the situation is such that implementation is required for safety concerns before the review process is completed.

Operator Aid Postings. Information posted to assist operations and support personnel in performing their duties. Posting **may** include copies of approved procedures (pages or portions), system drawings, graphs and curves.

Out of Commission. The terminology used for equipment, components, or systems when they are removed from service and no future use or mission is identified. OOC equipment, components, and systems **may** be retired in place.

Out of Service. The terminology used for equipment, components, and systems that are not available for operation for any given reason. Restoration to service is intended.

Pre-Evolution Briefing. A formal briefing of the actions planned to perform an approved evolution, including discussion of procedures, hazards, safety precautions, controls, expected upsets and anomalies, emergency response, and other items relevant to the evolution.

Qualified Staff Member. An individual on the Facility Manager's staff whom the Facility Manager deems capable and competent, and who is considered to have the expertise on the subject matter (a Subject Matter Expert (SME)).

Round Sheets. Controlled sheets used to collect data, record equipment status, note unusual conditions, and note trends.

Safety Envelope. See the Nuclear Safety Manual.

Shift Order. A document that communicates short-term information to assigned personnel.

Standing Order. A document issued by senior management that provides administrative guidance or instruction applicable to the Site.

Telephone Concurrence (Telecon). Approval or concurrence received by telephone.

APPENDIX 1

DEFINITIONS AND ACRONYMS

(Page 3 of 4)

1.3 Acronyms

AB	Authorization Basis
AC	Administrative Control
ADR	Alarm Deactivation Request
ALARA	As Low As Reasonably Achievable
BDCF	Baseline Document Change Form
CAM	Continuous Air Monitor
CCA	Configuration Control Authority
COOP	Conduct of Operations
CSO	Criticality Safety Officer
CSOL	Criticality Safety Operating Limit
CTC	Compliance Tracking Coordinator
D&D	Decontamination and Decommissioning
DOE	Department of Energy
EOE	Engineering Operability Evaluation
FM	Facility Manager
IDC	Item Description Code
ISMS	Integrated Safety Management System
ISR	Independent Safety Review
IV	Independent Verification
IWCP	Integrated Work Control Program
JCO	Justification for Continued Operation
JTB	Job Task Briefing
K-H	Kaiser-Hill Company, LLC
LCO	Limiting Condition for Operation
LO/TO	Lockout/Tagout
LS/DW	Life Safety/Disaster Warning
MAA	Material Access Area
MAR	Material at Risk
MST	Material Surveillance Team
NCR	Nonconformance Report
NMC	Nuclear Material Control
NMSL	Nuclear Materials Safety Limit
NSM	Nuclear Safety Manual
OA	Order Administrator
OJT	On-The-Job Training
OM	Operations Manager
OOC	Out of Commission
OOS	Out of Service
OOT	Out-of-Tolerance
OS&IH	Occupational Safety & Industrial Hygiene
PEB	Pre-Evolution Briefing
PMT	Post-Maintenance Test
POD	Plan of the Day
PPE	Personal Protective Equipment

APPENDIX 1

DEFINITIONS AND ACRONYMS

(Page 4 of 4)

PS	Process Specialist
PSOA	Principal Standing Order Administrator
RBA	Radiological Buffer Area
RCT	Radiological Control Technician
RM	Responsible Manager
RWP	Radiological Work Permit
SAAM	Selective Alpha Air Monitor
SDRM	Site Document Requirements Manual
SER	System Evaluation Report
SERM	Site Engineering Requirements Manual
SES	Safety Evaluation Screen
SM	Shift Manager
SME	Subject Matter Expert
SNM	Special Nuclear Material
SOE	Stationary Operating Engineer
SRM	Site Records Management
SSC	Structures, Systems and Components
STA	Shift Technical Advisor
TIM	Training Implementation Matrix
TM	Temporary Modification
TOC	Table of Contents
TPM	Training Program Manual
TSR	Technical Safety Requirement
USQ	Unreviewed Safety Question
USQD	Unreviewed Safety Question Determination

APPENDIX 2
PLAN OF THE DAY CONTENT
(Page 1 of 1)

- Baseline Activities
- Maintenance and Post-Maintenance Testing
 - Preventive Maintenance
- Craft Work
- Construction Work
- Demolition Work
- Surveillances
- Waste Transfer Operations
- Special Nuclear Material, Hazardous Material, and Chemical Inventories
- Major Equipment Rotation which Impacts Building Availability or Planned Work
- Alarm Tests and Calibrations
- Instrument Tests and Calibrations
- Laboratory Analyses
- Tours, Audits, Assessments and Inspections
- Emergency Exercises and Drills
- Training Involving System Operation
- Testing (components, systems)
- Experiments
- Security Force Exercises
- Movement of Waste Drums or Other Containers of Radioactive Material
 - General Housekeeping and Special Cleanup
- Planned Power Outages or Other Utility Outages
- Other

**APPENDIX 3
EVOLUTION REQUEST FORM**
(Page 1 of 1)

EVOLUTION REQUEST FORM				
Date: _____ WP #/Procedure #: _____				
Evolution Description: _____				
The building or Site area in which the activity is to be performed: _____				
The organization performing the activity: _____				
Type of Activity (circle the section of the POD appropriate for the activity):				
Surveillance D&D Other: _____	Maintenance Construction	Tour/Inspection Exercise	Training Drill	Mission Test
Type of Schedule: Daily Weekly One Time Other: _____				
Shift for the Activity?	1 ST	2 nd	3rd	
Total Personnel Involved	_____	_____	_____	
Material Ready?	Yes	No	N/A	
Packages Complete with Signatures?	Yes	No	N/A	
LO/TO Required?	Yes	No	N/A	
Radiological Work Permit?	Yes	No	N/A	
RWP #: _____				
Date to Perform Work: _____ Start Time: _____				
Estimated Completion Date: _____ End Time: _____				
Pre-Evolution Briefing Time/Date: _____ Place: _____				
Major Hazards Involved: _____				

Comments: _____				

Name: _____ Organization: _____				
Phone/Page/Facsimile: _____ Building: _____				
Signature: _____ Date: _____				

APPENDIX 4
PRE-EVOLUTION BRIEFING RECORD
(Page 1 of 4)

Evolution Description: _____

Evolution Supervisor: _____

A. * Date/Time of PEB: _____

B. * Applicable Procedure Number/Work Package Number: _____

C. * Personnel Attending: (List here or attach an attendance roster):

NAME	EMPLOYEE #	PROJECT
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NAME	EMPLOYEE #	PROJECT
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Briefing Check-Off List:

INITIALS

1. The evolution is scheduled on the POD.
2. The trainee-to-instructor ratio is as authorized by the FM.
3. Evolution Supervisor has conducted a walkdown for new or complex evolutions if not previously dry run.
4. Participants have the procedures, work package, or other documents needed.

APPENDIX 4

PRE-EVOLUTION BRIEFING RECORD

(Page 2 of 4)

5. The necessary documents are available for use at the PEB (e.g., *CSOL/NMSL, Material Safety Data Sheets, RWP, criticality safety analyses, etc.*).

6. *Evolution Supervisor briefs changes to procedures that have occurred since the activity was last conducted.

7. Necessary personnel are in attendance. Trainee limitations on operating equipment/taking rounds/making log entries discussed.

8. *The scope of the evolution to be performed including LO/TO requirements and responsibilities of each individual identified and discussed. Procedure covered in sufficient detail to ensure participants understand the evolution, and their role. Radiological hold points discussed. If multiple work groups are involved with interfacing activities, specific work scopes, interfacing procedures, and coordination of the groups discussed.

9. *Current facility conditions, impacts of other evolutions, and impacts of this evolution on ongoing work discussed with SM. Additionally, for nuclear facilities, impact of this evolution on the AB discussed with the SM.

10. Precautions, limitations, initial conditions, and prerequisites reviewed.

11. Adequate communications equipment available.

12. The required tools and equipment are available.

13. Portable instruments are available (*if required*).

14. Personnel taking, receiving, or transmitting data are familiar with the data requirements.

15. Expected instrument readings discussed (*if applicable*).

16. Appropriate material transfer, and data recording forms are available.

17. *Discuss expected Item Description Codes (IDC), and action to take if other IDCs are encountered.

APPENDIX 4

PRE-EVOLUTION BRIEFING RECORD

(Page 3 of 4)

18. Are hazardous materials involved? [] YES [] NO (if answer is no, continue the briefing check-off list. If yes, complete and discuss Appendix 5, Hazardous Material Release Prevention/Preparedness Checklist, and continue the briefing check-off list).

19. Hazards associated with the evolution and PPE/safety equipment discussed. Location of eyewash, safety showers, and spill kits discussed (if applicable); heat stress/cold stress briefing per Occupational Safety & Industrial Hygiene Program Manual Chapter 16 (if applicable).

20. Waste disposal and applicable sections of the Waste Generating Instruction have been discussed. Waste Generator qualified personnel available.

21. *RWP discussed.

22. ALARA review for new activities discussed.

23. *Expected radiological conditions discussed, including contamination and radiation levels. Methods to minimize exposure discussed.

24. Criticality Safety Evaluation discussed for new activities. Criticality Safety Officer (CSO) may assist.

25. Actions to be taken in the event of emergencies or upsets, or if any controls are exceeded, discussed (fire, criticality, glovebox overheat, SAAM/CAM alarm, CSOL limits, etc.).

26. *Recent problems, changes, lessons learned, and occurrences relative to the evolution discussed.

27. Potential shift changes, shift reliefs and breaks discussed.

28. *Applicable NMSLs and/or CSOLs discussed. NSM 3.12 assignment made. Reminder made that satisfactory NSM 3.12 is reported to the Evolution Supervisor prior to activity start, and changes requiring another NSM 3.12 discussed.

29. *Open criticality infractions and deficiencies which impact the evolution discussed. Discuss Material at Risk (MAR) control (if applicable); steps to take if exceeded.

APPENDIX 4

PRE-EVOLUTION BRIEFING RECORD

(Page 4 of 4)

- 30. Egress procedures and egress routes and assembly areas discussed. _____
- 31. Unique postings in the work area discussed. _____
- 32. Escort requirements discussed and escort assignments made. _____
- 33. Provisions for housekeeping and final cleanup discussed. _____
- 34. *Open-ended questions asked to ensure participants understand the evolution and are aware of hazards involved, hazard controls, responses expected during the evolution and procedural compliance requirements. Stop-work authority of individuals discussed. Solutions to barriers impeding safe/efficient work discussed. Watches synchronized if applicable. _____
- 35. *All questions have been adequately answered. _____

Evolution Supervisor

Date

*Required for shortened PEB. See Section 6.3.3.1.

APPENDIX 5

HAZARDOUS MATERIAL RELEASE PREVENTION/PREPAREDNESS CHECKLIST
(Page 1 of 1)

Completed by: _____ Date: _____
Evolution Description: _____

Fill in when hazardous materials (*e.g., hazardous substances, wastes, or chemicals*) are involved:

1. Identify the hazards, and the hazardous material and associated systems. (Concentration and volumes). Discuss the effect of these on the individual:

2. Identify potential "failure points" in the systems:

[] Valves _____
[] Flange connections _____
[] Sight glasses _____
[] Hoses or tubing _____
[] Liquid transfer points/containers _____
[] Other _____

3. Discuss controls for prevention/minimization of release/or to minimize the hazards and protect against overexposure. Discuss PPE/Safety Equipment to be used. Discuss spill kits/safety showers/eyewash locations:

4. Identify hazardous work situations (*e.g., elevated work, confined space, cold stress, heat stress, trenches, etc.*):

5. Pre-planned response to a hazardous spill/release discussion: (*discuss emergency response and appropriate PPE*):

When Appendix 5 is used, attach it to Appendix 4 for filing or for inclusion in a work package as applicable.

60

APPENDIX 6

TEMPORARY MODIFICATION REQUEST FORM

(Page 1 of 1)

TEMPORARY MODIFICATION REQUEST FORM

TM No.: _____ Expiration Date: _____

Safety Class or Safety Significant SSC Affected: YES NO (circle one)

Affected Equipment and Functions:

Reasons for Modification and Summary Description:

Requested by:

Print Name and Organization Signature Extension Date

Comments: _____

WCF No.: _____ AB Safety Evaluation _____ Date: _____
Yes/NA/Shift Manager's Initials

Shift Manager Review:

Print Name Signature Extension Date

Project Chief Engineer Concurrence*:

Print Name Signature Extension Date

Facility Manager Approval*:

Print Name Signature Extension Date

*May be obtained by phone in which case Shift Manager signs this line indicating telecon approval.

TEMPORARY MODIFICATION LOG SHEET

(Page 1 of 1)

[illegible]

APPENDIX 8

TEMPORARY MODIFICATION TAG SHEET
(Page 1 of 2)

TEMPORARY MODIFICATION TAG SHEET

TM No.: _____			
Tag Types	DAA-Disabled Alarm MJ-Mechanical Jumper O-Other	PCC-Pulled Circuit Card EJ-Electrical Jumper	LL-Lifted Lead BF-Blank Flange
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	
Tag # _____	Type _____ Location: _____ Description: _____	To Tag # _____ _____ _____	

APPENDIX 8

TEMPORARY MODIFICATION TAG SHEET

(Page 2 of 2)

INSTRUCTIONS FOR PREPARATION OF A TM TAG SHEET AND INSTRUCTIONS FOR PREPARATION OF A
TM TAG

INSTRUCTIONS FOR COMPLETION OF A TM TAG SHEET

- **TM No.:** TM number.
- **Tag No.:** Tag number (such as 707-1, 707-2, 707-3, etc.)
- **Location:** Give a description of the location such as building number, floor, room number, northeast corner, etc.
- **Description:** Include the following information:
 - Disabled Alarm (DAA) - panel name, number, window location, window nomenclature.
 - Lifted Lead (LL) - cabinet name, number, terminal block number, terminal number, wire number.
 - Electrical Jumper (EJ) - cabinet name, number, terminal block number, to tag # (if applicable).
 - Pulled Circuit Card (PCC) - cabinet name, number, circuit card.
 - Mechanical Jumpers (MJ) - location, line number or valve number, to tag # (if applicable).
 - Blank Flange (BF) - location, line number or flange number.
 - Other (O) - Identify type of device, provide enough information for location and evaluation of the temporary modification and to tag # (if applicable)
- **Tag Types:** Such as Disabled Alarm (DAA), Lifted Lead (LL), Electrical Jumper (EJ) and others listed in the Description Section above.
- **To Tag #:** Jumpers that are of such length that both ends are not visible when installed will have a temporary modification tag attached to each end. Indicate the tag number at the other end of the jumper in the To Tag # line. For shorter jumpers or other modification, enter N/A. For short jumpers with only one tag, enter information about both ends of the jumper.

INSTRUCTIONS FOR COMPLETION OF A TM TAG

NOTE: Use information from the TM Tag Sheet to fill out Tags.

- **TM No.:** TM number.
- **Tag No.:** Tag number
- **Location:** Give a description of the location such as building number, floor, room number, northeast corner, etc.
- **Description:** Include the following information:
 - Pulled Circuit Card (PCC) - cabinet name, number, circuit card.
 - Disabled Alarm (DAA) - panel name, number, window location, window nomenclature.
 - Lifted Lead (LL) - cabinet name, number, terminal block number, terminal number, wire number.
 - Electrical Jumper (EJ) - cabinet name, number, terminal block number, to tag # (if applicable).
 - Mechanical Jumpers (MJ) - location, line number or valve number, to tag # (if applicable).
 - Blank Flange (BF) - location, line number or flange number.
 - Other (O) - Identify type of device, provide enough information for location and evaluation of the temporary modification and to tag # (if applicable).
- **Installed by:** Name of individual installing the modification and the tag.
- **Date:** Date of installation of tag.
- **Verified by:** Name of a second individual verifying correct modification installation and the installation of the tag for Safety Class and Safety Significant SSC. Otherwise enter N/A.
- **Date:** Date installation was verified. Otherwise enter N/A

APPENDIX 9

TEMPORARY MODIFICATION EXTENSION REQUEST

(Page 1 of 1)

TEMPORARY MODIFICATION EXTENSION REQUEST

TM No.: _____

Current TM Expiration Date: _____

Desired Expiration Date: _____

Reason for Extension: _____

AB Safety Evaluation: _____
Yes/NA/Shift Manager's Initials *Date*

New Expiration Date Approved is: _____

Submitted by: _____
Name/Signature *Date*

Reviewed by: _____
Shift Manager Name/Signature *Date*

Concurrence: _____
Project Chief Engineer Name/Signature *Date*

Approval: _____
Facility Manager Name/Signature *Date*

65

APPENDIX 10

TEMPORARY MODIFICATION TAG

(Page 1 of 1)

TEMPORARY MODIFICATION TAG	
TM No.:	_____
Tag No.:	_____
Location:	_____ _____ _____
Description:	_____ _____ _____ _____
Installed by:	_____
Date:	_____
Verified by:	_____
Date:	_____

46

APPENDIX 11

SHIFT RELIEF AND TURNOVER CHECKLIST

(Page 1 of 1)

**Relieving
Individual's Initials**

1. Major activities ongoing or planned/major maintenance ongoing or planned. _____
2. Problems or significant issues discussed. _____
3. Plan of the Day reviewed. _____
4. Systems Status reviewed. _____
5. Surveillances ongoing or planned. _____
6. LO/TO approved during the shift relevant to the work station discussed. _____
7. Unusual conditions. _____
8. Equipment problems. _____
9. Alarm conditions. _____
10. Tests or experiments ongoing or planned. _____
11. Other significant information such as required actions in effect, corrective actions in process, terminations or suspensions applicable, etc. _____
12. Log and round sheet reviews. SM review of Temporary Modification Log. _____
13. Areas newly posted for respiratory protection noted. _____
14. Waste and environmental problems discussed. _____
15. Shift Orders and Night Orders in effect reviewed. Recent changes to Operations Orders and procedures reviewed. New Standing Orders reviewed. _____
16. Security keys turnover. _____
17. Fire watches ongoing or planned. _____
18. MAR Limits review if applicable (SM, STA) _____
19. General Comments. _____

Individual being relieved:

Individual relieving:

Name/Date/Time

Name/Date/Time

APPENDIX 12
STANDING ORDER FORMAT
(Page 1 of 1)

Standing Order No: _____
Revision: _____
Effective Date: _____
Expiration Date: _____
Page: _____

Subject: _____

Purpose: _____

Scope and Applicability: _____

Instructions: _____

Independent Safety Review (*if required*) _____
Date

Approved by: _____
Name/Title/Signature Date

Responsible Manager Name/Organization: _____

REVIEWED FOR CLASSIFICATION/UCNI
BY: _____
DATE: _____

APPENDIX 13

OPERATIONS ORDER EVALUATION CHECKLIST

(Page 1 of 3)

Operations Order No.: _____ Revision No.: _____

Title: _____

Originator: _____ Extension/Pager: _____ Building: _____

This checklist is used to determine if a proposed Operations Order is an Administrative Operations Order or a Technical Operations Order. The Facility Manager determines if a Technical Operations Order is urgent enough to issue before the review cycle is completed. If so, it is assigned to a qualified member of the facility staff (a *SME*), an STA, SM or Project Chief Engineer to review the Operations Order for technical content. In this case it becomes an Interim Technical Operations Order. Operations Orders are approved by the Facility Manager.

Basic Checklist

The following questions are answered in order to categorize the proposed Operations Order as Administrative or Technical. If the answers to all five questions are NO, the Operations Order is Administrative. If the answer to any of the questions in this section is YES, then it is a Technical Operations Order, and the applicable disciplines indicated below are required to review the Order.

For all Operations Orders, review PRO-569-ADM-02.01 to determine Independent Safety Review requirements, and review PRO-664-NSP-USQP to determine AB safety evaluation requirements.

- | | <u>YES</u> | <u>NO</u> |
|--|------------|-----------|
| 1. Could the proposed Operations Order affect personnel or public safety by hazards other than radiological? | [] | [] |
| 2. Could the proposed Operations Order affect the environment by hazards other than radiological? | [] | [] |
| 3. Could the proposed Operations Order affect Authorization Basis requirements, including the Site SAR? | [] | [] |

APPENDIX 13

OPERATIONS ORDER EVALUATION CHECKLIST

(Page 2 of 3)

- | | <u>YES</u> | <u>NO</u> |
|--|------------|-----------|
| 4. Does the proposed Operations Order provide procedural steps for manipulation of facility systems or equipment in non-nuclear facilities? | [] | [] |
| 5. Does the proposed Operations Order involve manipulation of systems or equipment in nuclear facilities, or does it involve handling, processing, use, storage, transfer, measurement, survey, or inventory of radioactive or hazardous material, criticality detection and alarm, or is criticality safety affected? | [] | [] |

Reviews Required:

- For Technical Operations Orders when only questions 1, 2, or 4 are checked YES:
 - Occupational Safety and Industrial Hygiene
 - Engineering (*technical staff assigned to the affected facility or as assigned by the Project Chief Engineer*)
 - Environmental Compliance if hazardous materials are involved
- For Technical Operations Orders when questions 3 or 5 are checked YES:
 - Nuclear Safety
 - Criticality Safety
 - Radiological Safety
 - Occupational Safety and Industrial Hygiene
 - Engineering (*technical staff assigned to the affected facility or as assigned by the Project Chief Engineer*)
 - Environmental Compliance if hazardous materials are involved
 - Nuclear Materials Control and Accountability and Traffic and Transportation if on-site or off-site movement of Special Nuclear Material (SNM) or other radioactive material is involved

APPENDIX 13
OPERATIONS ORDER EVALUATION CHECKLIST
(Page 3 of 3)

Categorization

Operations Order determined to be: ☐ Administrative
☐ Technical

If Technical, will it be an Interim Operations Order? ☐ YES ☐ NO

If YES, qualified staff member signature required.

Comments: (For Interim Operations Orders, also indicate the organizations consulted)

Qualified Staff Member Date

Facility Manager Date

09/30/00

APPENDIX 14

OPERATIONS ORDER FORMAT

(Page 1 of 1)

Building

Operations Order No: _____

Revision: _____

Effective Date: _____

Expiration Date: _____

Page: _____

Category: ☐ Administrative ☐ Technical ☐ Interim

Approved by: _____
Facility Manager Date

[] Convert to Procedure by: _____
Date Assigned Manager

[] Required Reading: _____
Indicate Distribution for Groups/Individuals

Purpose:

Scope and Applicability: This Operations Order applies to:

Instructions:

REVIEWED FOR CLASSIFICATION/UCNI

BY: _____

DATE: _____

APPENDIX 15
SHIFT ORDER FORMAT
(Page 1 of 1)

Building _____

Shift Order No: _____
Revision: _____
Effective Date: _____
Expiration Date: _____
Page: _____

Subject: _____

Information and Administrative Instructions:

Approved by: _____
Facility Manager or Operations Manager Date

APPENDIX 16
OPERATOR AID POSTING LOG
(Page 1 of 1)

LOG NO.	POSTING INFORMATION: (include posting type and content, and date of posting)	LOCATION: (be as specific as possible)	SM APPROVAL: (name, date, and initials)	REFERENCE DOCUMENT: (identify applicable technical documents)

APPENDIX 17
COMMUNICATIONS GUIDE
(Page 1 of 1)

PHONETIC ALPHABET

A - Alpha	J - Juliett	S - Sierra
B - Bravo	K - Kilo	T - Tango
C - Charlie	L - Lima	U - Uniform
D - Delta	M - Mike	V - Victor
E - Echo	N - November	W - Whiskey
F - Foxtrot	O - Oscar	X - Xray
G - Golf	P - Papa	Y - Yankee
H - Hotel	Q - Quebec	Z - Zulu
I - India	R - Romeo	

PROWORDS

<u>Terminology</u>	<u>Meaning</u>
Copy or Roger	I understand
Wilco	I understand and will comply
Say again	I do not understand; repeat
Wrong	Information is incorrect
Correction	Correct information follows
Over	Used at the end of a message when the recipient is expected to answer
Out	End of message. <i>(Do not call back, no further communication is necessary)</i>

APPENDIX 18
RADIO COMMUNICATIONS GUIDE
(Page 1 of 1)

Initial call-up to establish communications.

"Shift Manager, this is the Evolution Supervisor, over"

This ensures that the communications link is established before more lengthy transmissions are made. Response:

"This is the Shift Manager, over"

The SM responds in the shortened format, not using the call-up of the Evolution Supervisor, because he/she knows that the Evolution Supervisor is on line waiting for this transmission.

"This is the Evolution Supervisor, request permission to conduct Section 7.3 of the drain procedure for Tank D1102, over"

Note that the Evolution supervisor would use the Phonetic Alphabet to identify the tank numbers when naming the tank by saying, "Tank Delta One One Zero Two".

"This is the Shift Manager, wait, out"

The SM uses "wait" to indicate that the response will come back after a delay. If enough time elapses before the reply can be made, the SM **Should** call-up the Evolution Supervisor by title to alert him/her to the transmission.

"Evolution Supervisor, this is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1102, over"

Note that the SM does not say, "permission granted". Making the reply a direct order clarifies the exchange. Also, repeating the procedure paragraph number and the tank phonetically clarifies the order.

"This is the Evolution Supervisor, roger, conduct Section 7.3 of the drain procedure on Tank D1102, out"

Note that the Evolution Supervisor repeats the order back for clarity, and ends the transmission with "out" vice "over", because he does not need confirmation that the SM heard the response. The SM will call-up again if it is unclear that the order was understood. If the request to the SM had been misunderstood, the exchange would have gone like this:

"This is the Evolution Supervisor, request permission to conduct Section 7.3 of the drain procedure on Tank D1102, over"

"This is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1103, over"

"This is the Evolution Supervisor, wrong, request permission to conduct Section 7.3 on Tank D1102, over"

"This is the Shift Manager, conduct Section 7.3 on Tank D1102, over"

"This is the Evolution Supervisor, roger, out"

If the SM had caught the error during the transmission, he/she could have used the proword "correction" as follows:

"This is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1103, correction, Tank D1102, over"

76

**APPENDIX 19
ROUND SHEET FORMAT**
(Page 1 of 4)

Number: 00-62
Revision: 10
Effective Date: 01/30/98
Expirations Date: 07/30/99
Page: 5 of 22

BUILDING CONTROL ROOM LOG SHEETS

CONTROLLERS / GAUGES	LIMITS	EQUIP. CHECK	ACTUAL READING			PROBLEMS / COMMENTS
			0000 TO 0800 Hrs.	0800 TO 1600 Hrs.	1600 TO 2400 Hrs.	

UCB NO. 1

41-PDIC-301 ZONE 1	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-302A ZONE 2A	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-303 ZONE 3	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-304 ZONE 4	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-302B ZONE 2B	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
OY LEACH ZONE 9	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-305 ZONE 5	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-306 ZONE 6	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-307 ZONE 7	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-308 ZONE 8	G/B	MAX. 6.0 MIN. 3.5	IN. W.G.				
PDIC-1020A		MAX. 11.5 MIN. 5.5	IN. W.G.				
PDIC-1020B		MAX. 11.5 MIN. 5.5	IN. W.G.				
41-PDIC-327 FN 3 & 4		MAX. 5.7 MIN. 4.7	IN. W.G.				
41-PDIC-328 FN 3 & 4		MAX. 5.7 MIN. 4.7	IN. W.G.				

APPENDIX 19
ROUND SHEET FORMAT
(Page 2 of 4)

Number: 00-62
Revision: 10
Effective Date: 01/30/98
Expirations Date: 07/30/99
Page: 9 of 22

BUILDING CONTROL ROOM LOG SHEETS

New Deficiencies Identified (CIRCLE ONE):

0000 TO 0800 -YES / NO 0800 TO 1600 - YES / NO 1600 TO 2400 - YES / NO

WCF Submitted in Accordance With ICWP Manual for new deficiencies
(CIRCLE ONE):

0000 TO 0800 -YES / NO 0800 TO 1600 - YES / NO 1600 TO 2400 - YES / NO

COMMENTS: _____

Performed By: (2330 TO 0730)

SOE: _____ Date: _____ SM: _____ Date: _____

Performed By: (0730 TO 1530)

SOE: _____ Date: _____ SM: _____ Date: _____

Performed By: (1530 TO 2330)

SOE: _____ Date: _____ SM: _____ Date: _____

Reviewed By: _____

_____ Date: _____

**APPENDIX 19
ROUND SHEET FORMAT**
(Page 3 of 4)

Number: 00-62
Revision: 10
Effective Date: 01/30/98
Expirations Date: 07/30/99
Page: 10 of 22

BUILDING INSIDE ROUNDS

EQUIPMENT / AREA	EQUIP. STATUS	LIMITS/ EXPECTED RESULT	ACTUAL READING			PROBLEMS / COMMENTS
			0000 TO 0800 Hrs.	0800 TO 1600 Hrs.	1600 TO 2400 Hrs.	
OUTSIDE AIR TEMP.	TEMPERATURE		F	F	F	
S-13 AHU-1	VISUAL INSPECT	ON	ON / OFF	ON / OFF	ON / OFF	
	DISCH. TEMP.		F	F	F	
STM. SPLY. PRESS	PSIG	MIN. 85				
E-1 MAIN EXH. FAN	VISUAL INSPECT	3 FANS MUST BE OPERABLE	ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-2 MAIN EXH. FAN	VISUAL INSPECT		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-3 MAIN EXH. FAN	VISUAL INSPECT		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-4 MAIN EXH. FAN	VISUAL INSPECT		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-5 MAIN EXH. FAN	VISUAL INSPECT		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-6 MAIN EXH. FAN	VISUAL INSPECT		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
AHU-2	VISUAL INSPECT	ON	ON / OFF	ON / OFF	ON / OFF	
	DISCH. TEMP.		F	F	F	
FAN S-8	VISUAL INSPECT	ON	ON / OFF	ON / OFF	ON / OFF	STEAM SECURED TO THE COILS- DIRTY FILTERS
	DISCH. TEMP.		F	F	F	
UPS ATS	NORMAL POWER AVAIL. LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
	EMER. POWER AVAIL. LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
UPS	UPS OUTPUT VOLTAGE	MAX. 130 MIN. 110		V		
	AC RESERVE VOLTAGE	MAX. 130 MIN. 110		V		
	INVERTER PHASE LOCKED LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
AHU-3	VISUAL INSPECT	ON	ON / OFF	ON / OFF	ON / OFF	
	DISCH. TEMP.		F	F	F	

APPENDIX 19
ROUND SHEET FORMAT
(Page 4 of 4)

Number: 00-62
Revision: 10
Effective Date: 01/30/98
Expirations Date: 07/30/99
Page: 15 of 22

BUILDING INSIDE ROUNDS

New Deficiencies Identified (CIRCLE ONE):

0000 TO 0800 -YES / NO 0800 TO 1600 - YES / NO 1600 TO 2400 - YES / NO

WCF Submitted in Accordance With IWCP Manual for new deficiencies
(CIRCLE ONE):

0000 TO 0800 -YES / NO 0800 TO 1600 - YES / NO 1600 TO 2400 - YES / NO

COMMENTS: _____

Performed By: (2330 TO 0730)

SOE: _____ Date: _____ SM: _____ Date: _____

Performed By: (0730 TO 1530)

SOE: _____ Date: _____ SM: _____ Date: _____

Performed By: (1530 TO 2330)

SOE: _____ Date: _____ SM: _____ Date: _____

Reviewed By:

_____ Date: _____

APPENDIX 20

INSPECTION DURING ROUND CHECKS

(Page 1 of 2)

Inspection during rounds include, but are not limited to, the below listed items:

1. General Area

- (1) Satisfactory housekeeping and cleanliness; egress routes are not blocked
- (2) Electrical covers in place securely
- (3) Drain hoses in place securely
- (4) Insulation damage noted
- (5) Noise and vibration levels
- (6) Equipment and component labels installed and readable where required
- (7) Oil, steam, or water leakage noted, including roof in-leakage or floor leakage
- (8) Danger/caution/information tags securely in place
- (9) Combustible loading, radiological, or other safety problems noted and reported
- (10) Radiation and contamination postings clearly marked
- (11) Floor drains unblocked. Berms intact
- (12) Sump levels
- (13) Ceiling tiles in place which impact sprinkler system operability
- (14) Inoperable lighting; doors with closure problems; fire doors closed as required
- (15) Uncontrolled operator aids noted
- (16) Unlabelled containers noted

2. Electrical Panels

- (1) Breakers properly aligned
- (2) Indicating lights working
- (3) Abnormal odors
- (4) Electrical panel covers and doors in place securely

3. Transformers

- (1) Temperatures normal; no leaks

4. Local Control Panels

- (1) Alarms not annunciating, or alarms that are annunciating are expected
- (2) Recorders operating properly
- (3) Gauges, meters, and indicators within expected ranges
- (4) Indicating lights operable

APPENDIX 20

INSPECTION DURING ROUND CHECKS

(Page 2 of 2)

5. Safety Hazards

- (1) Gas cylinders secured, with caps installed if bottle not connected
- (2) Water leakage around energized equipment
- (3) Walking surfaces free of water or oil
- (4) Scaffolds, temporarily stored materials, or ladders do not create a hazard
- (5) No water hammer noted

6. Equipment Checks

- (1) Glove boxes (*leaks or other abnormal conditions*)
- (2) Motor and pump housing temperatures and vibration
- (3) Noise levels normal
- (4) Belt tightness
- (5) Ground straps in place
- (6) Coupling guards in place
- (7) Fluid leakage wiped up
- (8) Ventilation intakes clear
- (9) Equipment lube oil normal
- (10) Light bulbs operable

7. Wires and Cables

- (1) Hold-down straps secure

8. Doors

- (1) Closed and/or locked as required
- (2) Fire doors working properly

9. Building Exterior

- (1) Lighting
- (2) Walkways and ladders clear
- (3) Ice and snow cleared
- (4) No water hammers or leaks observed on steam and condensate lines
- (5) Safety hazards (*ladders, potholes, unsecured loads, elevated work in high wind*)

APPENDIX 21

COMPLIANCE TRACKING INFORMATION GUIDE

(Page 1 of 1)

Compliance Tracking Forms contain the following types of information:

- Surveillance title and description as stated in the AB
- Related USQD, EOE, or JCO which requires the compensatory measures
- Building number
- Equipment name and/or number
- Procedure identification
- Out-of-tolerance: Yes No N/A
- Comments
- Integrated Work Control Form submitted: Yes No
- The time the surveillance was completed (*24 hour time*)
- Deficient condition identified: Yes No
- Surveillance frequency
- Performing group
- Performed by (name and signature)
- Date of surveillance
- Appropriate Compliance Tracking Number
- Compliance Tracking Coordinator signature
- Shift Manager's Review signature

APPENDIX 22

TECHNICAL CONCERN ASSESSMENT CHECKLIST

(Page 1 of 2)

A. Technical Concern No.: _____ Building _____ Date: _____

B. Description of the Condition/Deficiency/Problem/Concern: _____

C. Safety Class or Safety Significant SSC Description Review:

1. Does the identified description affect the performance of the SSC or its capability to meet its intended function?

☐ Yes ☐ No ☐ Unknown

2. Does the description impact the ability of the SSC to successfully meet an LCO or other AB requirement?

☐ Yes ☐ No ☐ Unknown

3. Is the impact uncertain?

☐ Yes ☐ No

D. SM has declared the SSC inoperable pending follow-on action. ☐ Yes

SM has declared the SSC operable per Section 6.6.7 pending follow-on action.

☐ Yes

If "YES" or "Unknown" is checked for 1, 2 or 3 in Section C above, send to the Project Chief Engineer for follow-on action. If "No" is checked for questions 1, 2, and 3 in Section C above, SM completes Section E and notifies the FM.

APPENDIX 22

TECHNICAL CONCERN ASSESSMENT CHECKLIST

(Page 2 of 2)

E. Shift Manager Resolution

Justification: _____

No Action Required ☐ SM Signature/Date _____

F. Follow-on Action

Project Chief Engineer Determination:

☐ EOE Required EOE # _____

☐ AB Safety Evaluation Required SES/USQD #: _____

Comments to support declaration of operable/inoperable and actions required:

Project Chief Engineer _____ Signature/Date _____

G. Facility Manager Approval _____ Signature/Date _____

H. SM identification of document which implements any required actions:

SM Signature/Date: _____

**APPENDIX 23
RETURN-TO-SERVICE AND OPERABILITY CHECKLIST**
(Page 1 of 2)

System/Equipment/Component: • _____

Date: _____ Facility: _____

1.	IWCP Work Package and post-maintenance testing have been completed	_____ Initials	_____ Date
2.	Support systems are in service, if applicable	_____ Initials	_____ Date
3.	The system/equipment/component is lined-up and/or configured for operations	_____ Initials	_____ Date
4.	a. The Baseline Document Change Form (BDCF) is complete for a modification in accordance with 1-V51-COEM-DES-210	_____ Initials	_____ Date
	b. Procedures have been issued or revised, as applicable	_____ Initials	_____ Date
	c. Appropriate personnel have been trained	_____ Initials	_____ Date
	d. SERs have been updated, if required	_____ Initials	_____ Date
5.	The appropriate component alignment has been completed, if applicable	_____ Initials	_____ Date
6.	Other deficiencies, Nonconformance Reports (NCR), compensatory measures, required actions, USQDs, JCOs, EOE's, and ADRs affecting the system/equipment/component have been dispositioned	_____ Initials	_____ Date

APPENDIX 23

RETURN-TO-SERVICE AND OPERABILITY CHECKLIST

(Page 2 of 2)

7.	Applicable TSR surveillances and/or post-maintenance testing, required to be declared operable, have been completed	_____ Initials	_____ Date
	System/Equipment/Component in service (Items 1, 2, 3 and 5 as applicable)	_____ Shift Manager	_____ Date
	Safety Class and Safety Significant SSC is operable (Items 1 through 7)	_____ Shift Manager	_____ Date
	Concurrence that the in-service and/or operability declaration is acceptable	_____ Responsible Engineer	_____ Date
	In-service and operability declaration is noted	_____ Facility Manager	_____ Date
8.	Facility status display and Shift Manager's Log updated	_____ Initials	_____ Date
9.	Applicable Operations Orders, procedures or other documents relating to inoperability updated or canceled, as applicable	_____ Initials	_____ Date

*Mark N/A in the sections not applicable, and initial/date accordingly.

APPENDIX 24

RESUMPTION OF OPERATIONS FOLLOWING AN
AUTHORIZATION BASIS VIOLATION

(Page 1 of 1)

Facility: _____ Date: _____
Facility Manager: _____ Occurrence Report No.: _____
Point of Contact if not FM: _____ Date of Occurrence: _____

Description of Authorization Basis Violation:

Immediate Action:

Preliminary Root Cause¹:

Short-term Corrective Actions	Due Date/Status
Long-term Corrective Actions	Due Date/Status

Recovery Plan:

Signatures:

Facility Manager _____ Date _____

Independent Safety Review _____ Date _____

Approval to Resume: Project Manager Name/Signature _____ Date _____

¹MAN-062-CAUSEANALYSIS

09/30/00

APPENDIX 25
COMPONENT ALIGNMENT CHECKLIST
(Page 1 of 1)

System _____ Reference Procedure _____

Component ID/Description	Required Position	Actual Position	Positioner 1 st Checker Initials	2 nd Checker Initials

POSITIONER/1 ST CHECKER	2 ND CHECKER	REVIEWED BY SM:
Name: _____	Name: _____	Name: _____
Signature: _____	Signature: _____	Signature: _____
Date/Time Start: _____	Date/Time Start: _____	Date/Time: _____
Date/Time Comp.: _____	Date/Time Comp.: _____	

DEFICIENCIES: Operator completes Component ID and Deficiencies blocks below.
Shift Manager completes Corrective Action block and Completion block.

Component ID	Deficiencies	Corrective Action	Complete/Init.

APPENDIX 26

TECHNIQUES FOR USE IN COMPONENT
ALIGNMENT AND INDEPENDENT VERIFICATION

(Page 1 of 2)

Valves

NOTE

*Relative height of a valve stem is not used as the sole determinant of a valve's position. The appropriate technique for the valve type being verified **Should** be used. Some techniques may not be appropriate due to a particular make, model, or type of valve (physical construction). The vendor manual or the responsible engineer **Should** be consulted if there is any doubt about the correct verification technique to be used. The techniques in this Appendix apply to all forms of position checking, whether in IV, conducting lineups, or just checking a single item to ensure it is in the correct position.*

To verify valves OPEN (*does not apply to throttled valves*):

- Manipulate the valve in the CLOSED direction only as much as necessary to remove any slack from the operating mechanism, and verify valve stem movement.
- Open the valve fully, subject to normal precautions on back-seating valves.

To verify valves CLOSED:

CAUTION

Use of excessive force to close a valve could damage the valve seat.

Opening a valve that is being verified in the CLOSED position could unintentionally release fluid or pressurize piping and other components.

- Manipulate the valve in the CLOSED direction only as much as necessary to verify the valve is fully closed.
- Do not manipulate valves or ventilation dampers that have been set in throttled positions based on flow requirements. Verify position by visual methods only.

Although not normally accomplished, if it is desired to physically verify position of a throttled valve, proceed as follows:

CAUTION

*When operation of a throttled valve is necessary to determine position, it is likely that movement will negate the original throttled position and give no additional assurance of obtaining the correct position. Therefore, throttled valves **Should** not be moved without specific direction from the Shift Manager*

APPENDIX 26

TECHNIQUES FOR USE IN COMPONENT
ALIGNMENT AND INDEPENDENT VERIFICATION

(Page 2 of 2)

- If necessary to operate a throttled valve to determine position, have one individual determine if the valve was in the correct throttled position, and is correct when returning the valve to the desired throttled position. Have a second individual observe.
- Manipulate the valve in the CLOSED direction, counting the number of turns to fully close the valve, and open the valve to its required throttled position.
- If system or process operating conditions prohibit closing a throttled valve to verify its position, and, the act of fully opening the throttled valve will not unduly upset the system or process, use the number of turns throttled closed from full OPEN instead of the normal method of counting the turns open from fully CLOSED.

To verify Motor Operated Valves (MOVs) and Air Operated Valves (AOVs):

CAUTION

*Operability of an MOV that has been manually operated is not guaranteed. Manually positioning an MOV **may** result in failure of the valve to respond to a Remote Actuation Signal (that is, possible overtorquing due to manual operation).*

- Report any MOV that has been manually operated to the SM.
- When verifying MOVs or AOVs, use all available means of valve position indication, such as:
 - When remote operating switches are used, verify that the switch is in the correct position,
 - When remote indicating lights are used, verify that the lights reflect the correct position,
 - When local valve position indicators are used, verify that the local indicator (*on the valve/valve operator*) indicates the correct position.

Circuit Breakers

To verify circuit breakers:

- Verify the local operating selector switch is in the correct *position* (for example, local or remote).
- If accessible, qualified personnel verify that breaker power fuses are installed.
- Use local indicator lights, when provided, to verify that the breaker has power and is in the correct position.
- If the breaker is racked in, use the charging spring indicator, when provided, to verify that the operating spring is charged.
- Verify that the breaker is in the correct position and that the cubicle door is in good condition with all fasteners tight.
- Verify that the breaker is locked in the proper position, if required, and status lights are appropriate for that position.

APPENDIX 27

ALARM DEACTIVATION REQUEST (ADR)
(Page 1 of 2)

ALARM DEACTIVATION REQUEST		ADR No:	
O R I G I N A T O R	Type of Alarm:	Identification No:	
	Building:	<u>Planned Deactivation Period</u> from: _____ Time/Date to: _____ Time/Date	
	Location:		
	System:		
	Drawing No:		
	Lockout/Tagout No:		
	Reason for Deactivation (use numbered attachment pages as necessary):		
	Documents (IWCP WP, NCRs, etc.):		
	Is this alarm Safety Class or Safety Significant SSC related? <input type="checkbox"/> Yes <input type="checkbox"/> No Is the alarm a TSR requirement? <input type="checkbox"/> Yes <input type="checkbox"/> No List the TSR required actions, if any, for removal from service: List other required actions, if any, for removal from service: Attach a copy of the AB Safety Evaluation if applicable		
<u>DEACTIVATION</u>			
Concurrence:			
_____ Date Manager Responsible for the Item		_____ Date Project Chief Engineer	
APPROVAL FOR DEACTIVATION:		ALARM DEACTIVATED: Time/Date: _____	
_____ Date Shift Manager		_____ Date Shift Manager	
<u>REACTIVATION</u>			
ALARM REACTIVATED/ADR CLOSED: Time/Date: _____			
_____ Date Shift Manager			

APPENDIX 27

ALARM DEACTIVATION REQUEST (ADR)

(Page 2 of 2)

Instructions for Completing Alarm Deactivation Request

The originator provides information as indicated.

ORIGINATOR SECTION

1. Determine type of alarm. If the alarm is classified as Safety Class or Safety Significant SSC, the public, environment, or workers may be at risk by deactivating the alarm. Any questions concerning alarm classification **Should** be discussed with the Shift Manager and/or the Project Chief Engineer.
2. Provide Building number.
3. Provide location, including as much detail as needed.
4. Provide system name for which the alarm is a part (e.g., Life Safety/Disaster Warning System).
5. Provide the applicable drawing number. Mark N/A if this does not apply.
6. If a Lockout/Tagout will be used to deactivate the alarm, provide the Lockout/Tagout number. If Lockout/Tagout is not used, mark this item N/A.
7. Provide identification number of the alarm.
8. Provide planned deactivation period.
9. Provide a brief but complete description of the reason for alarm deactivation.
10. List all documents that provide the reason for and/or direct deactivation of the alarm.
11. If alarm is classified as Safety Class or Safety Significant SSC, determine if alarm is required by the TSR. Also, conduct the AB safety evaluation and attach it to the ADR.
12. List TSR required actions, if any. Attain SM concurrence for this. List other required actions. The manager responsible for the item concurs with the list.

DEACTIVATION SECTION

13. Manager responsible for the item concurrence is required.
14. If the alarm is classified as Safety Class or Safety Significant SSC, Project Chief Engineer concurrence is required. For other types of alarms, mark this N/A.
15. Approval is granted by the Shift Manager (with verbal concurrence of the Facility Manager).
16. ADR number is assigned by Shift Manager after approval and is then documented in header block of ADR (*at the top*).
17. When the alarm is deactivated, the Shift Manager's signature, time, and date are recorded.

REACTIVATION SECTION

18. Shift Manager and Responsible Manager approvals are required prior to reactivation. Upon return to service, the SM signs, and enters time and date in the Reactivation section.

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 1 of 12)

DOE ORDER 5480.19 GUIDELINE

IMPLEMENTED BY:

Chapter 1, Operations Organization and Administration

C.1 <u>Operations Policies</u>	COOP Sections 5., 6.1, 6.3.1 Kaiser-Hill Policy Manual 1-MAN-026, Site Security Manual Master Safeguards and Security Agreement (MSSA)
C.2 <u>Resources</u>	COOP Sections 5.2, 5.5, 6.5.1, 6.5.2
C.3 <u>Monitoring of Operating Performance</u>	COOP Sections 5.5, 5.6, 5.7, 5.8, 5.9, 6.4.9, 6.4.10 1-D97-ADM-16.01, Occurrence Reporting Process Corrective Action Procedures Manual 1-MAN-013-SIOM, Site Integrated Oversight Manual
C.4 <u>Accountability</u>	COOP Sections 2., 5.2, 5.5, 5.9 Kaiser-Hill Team Standards of Conduct; Performance Review System
C.5 <u>Management Training</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
C.6 <u>Planning for Safety</u>	COOP Sections 2., 5., 6.1, 6.2, 6.3.1, 6.3.2, 6.3.3, 6.4.1, 6.5.2, 6.6.13 MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual 1-MAN-016-ISM, Integrated Safety Management System Manual 1-MAN-018-NSM, Nuclear Safety Manual

Chapter 2, Shift Routines and Operating Practices

C.1 <u>Status Practices</u>	COOP Sections 5., 6.4.2, 6.4.9, 6.6.1, 6.6.2, 6.6.6, 6.6.8, 6.6.9, 6.6.10, 6.6.12
C.2 <u>Safety Practices</u>	COOP Sections 6.1.4, 6.3.1, 6.3.2, 6.3.3, 6.5.2, 6.6.13 MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual 1-MAN-016-ISM, Integrated Safety Management System Manual
C.3 <u>Operator Inspection Tours</u>	COOP Sections 5.6, 5.8, 5.9, 6.4.2, 6.4.3, 6.4.9 Appendix 20

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 2 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
C.4 <u>Round/Tour Inspection Sheets</u>	COOP Section 6.4.9 Appendix 19
C.5 <u>Personnel Protection</u>	COOP Sections 5.8, 5.9, 6.3.1, 6.3.3 MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual MAN-094-TPM, Training Program Manual (TPM) MAN-102-SRCM, Radiological Control Manual
C.6 <u>Response to Indications</u>	COOP Sections 6.6.9, 6.6.10, 6.6.11
C.7 <u>Resetting Protective Devices</u>	COOP Section 6.6.13
C.8 <u>Load Changes</u>	Not Applicable
C.9 <u>Authority to Operate Equipment</u>	COOP Sections 5.6, 5.9, 5.10, 6.3.3, 6.4.4
C.10 <u>Shift Operating Bases</u>	COOP Sections 6.4.2, 6.4.3
C.11 <u>Potentially Distractive Written Material and Devices</u>	COOP Section 6.4.3
<u>Chapter 3, Control Area Activities</u>	
C.1 <u>Control Area Access</u>	COOP Section 6.4.3
C.2 <u>Professional Behavior</u>	COOP Sections 5.8, 5.9, 5.10, 6.1, 6.4.3
C.3 <u>Monitoring the Main Control Boards</u>	COOP Sections 5.10, 6.4.3, 6.6.9, 6.6.10, 6.6.11
C.4 <u>Control Operator Ancillary Duties</u>	COOP Section 6.4.3

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 3 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
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C.5 <u>Operation of Control Area Equipment</u>	COOP Sections 5.10, 6.3.1, 6.4.3, 6.6.10
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Chapter 4, Communications

C.1 <u>Emergency Communications System</u>	COOP Section 6.4.8 Site Emergency Plan, EPLAN-99 Section 5 3-FD-SOP-923, Emergency Notifications
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C.2 <u>Public Address System</u>	COOP Section 6.4.8 Site Emergency Plan, EPLAN-99 Section 5 3-FD-SOP-923, Emergency Notifications
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C.3 <u>Contacting Operators</u>	COOP Section 6.4.8
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C.4 <u>Radios</u>	COOP Section 6.4.8 Site Emergency Plan, EPLAN-99 Section 5
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C.5 <u>Abbreviations and Acronyms</u>	COOP Section 6.4.8 Appendix 17
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C.6 <u>Oral Instructions and Informational Communication</u>	COOP Section 6.4.8 Appendix 17 Appendix 18 3-FD-SOP-923, Emergency Notifications
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Chapter 5, Control of On-Shift Training

C.1 <u>Adherence to Training Programs</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
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C.2 <u>On-Shift Instructor Qualifications</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
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C.3 <u>Qualified Operator Supervision and Control of Trainees</u>	COOP Sections 5.3, 6.3.3.2, 6.5.3 Appendix 4 MAN-094-TPM, Training Program Manual (TPM)
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APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 4 of 12)

DOE ORDER 5480.19 GUIDELINES	IMPLEMENTED BY:
C.4 <u>Operator Qualification Program Approval</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
C.5 <u>Training Documentation</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
C.6 <u>Suspension of Training</u>	COOP Section 6.5.3 MAN-094-TPM, Training Program Manual (TPM)
C.7 <u>Maximum Number of Trainees</u>	COOP Sections 5.3, 6.3.3, 6.3.3.2, 6.5.3 Appendix 4
<u>Chapter 6, Investigation of Abnormal Events</u>	
C.1 <u>Events Requiring Investigation</u>	1-D97-ADM-16.01, Occurrence Reporting Process COOP Section 5.6 COOP Section 5.7 COOP Section 6.4.4 COOP Section 6.6.3.4 COOP Section 6.6.7 <i>For Nuclear Facilities:</i> 1-MAN-022-PAAAPROG, Price-Anderson Amendments Act Program Manual
C.2 <u>Investigation Responsibility</u>	1-D97-ADM-16.01 MAN-062-CAUSEANALYSIS, Cause Analysis Requirements Manual
C.3 <u>Investigator Qualification</u>	1-D97-ADM-16.01 MAN-062-CAUSEANALYSIS, Cause Analysis Requirements Manual
C.4 <u>Information to be Gathered</u>	1-D97-ADM-16.01 MAN-062-CAUSEANALYSIS, Cause Analysis Requirements Manual
C.5 <u>Event Investigation</u>	1-D97-ADM-16.01 MAN-062-CAUSEANALYSIS, Cause Analysis Requirements Manual
C.6 <u>Investigative Report</u>	1-D97-ADM-16.01 MAN-062-CAUSEANALYSIS, Cause Analysis Requirements Manual

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 5 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
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<u>C.7</u> <u>Event Training</u>	COOP Section 5.6 1-MAN-017-LLGI-RM, Site Lessons Learned/Generic Implications Requirements Manual 1-D97-ADM-16.01, Occurrence Reporting Process
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<u>C.8</u> <u>Event Trending</u>	COOP Section 5.6 1-E93-ADM-16.18, Data Analysis and Trending for Performance Improvement 1-D97-ADM-16.01, Occurrence Reporting Process <i>For Nuclear Facilities:</i> 1-MAN-022-PAAAPROG, Price-Anderson Amendments Act Program Manual
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<u>C.9</u> <u>Sabotage</u>	Site Emergency Plan (EPLAN-99) and Building Emergency Response Operations
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Chapter 7, Notifications

<u>C.1</u> <u>Notification Procedures</u>	COOP Section 6.4.8, 1-D97-ADM-16.01, Occurrence Reporting Process Site Emergency Plan (EPLAN-99), Section 5 and Building Emergency Response Operations PRO-T56-EP-04.00, Emergency Classification and Protective Actions
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<u>C.2</u> <u>Notification Responsibility</u>	COOP Section 6.4.8 1-D97-ADM-16.01, Occurrence Reporting Process Site Emergency Plan (EPLAN-99), Section 5 and Building Emergency Response Operations PRO-T56-EP-04.00, Emergency Classification and Protective Actions
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<u>C.3</u> <u>Names and Phone Numbers</u>	COOP Section 6.4.8 Site Emergency Plan (EPLAN-99), Section 5 and Building Emergency Response Operations PRO-T56-EP-04.00, Emergency Classification and Protective Actions
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APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 6 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
C.4 <u>Documentation</u>	COOP Sections 6.4.8, 6.4.9 1-D97-ADM-16.01, Occurrence Reporting Process Site Emergency Plan (EPLAN-99) and Building Emergency Response Operations PRO-T56-EP-04.00, Emergency Classification and Protective Actions
C.5 <u>Communication Equipment</u>	COOP Section 6.4.8 Site Emergency Plan (EPLAN-99) and Building Emergency Response Operations
<u>Chapter 8, Control of Equipment and System Status</u>	
C.1 <u>Status Change Authorization and Reporting</u>	COOP Sections 5.6, 5.9, 5.10, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.8, 6.6.1, 6.6.2, 6.6.6, 6.6.11, 6.6.12
C.2 <u>Equipment and System Alignment</u>	COOP, Sections 6.6.1, 6.6.8
C.3 <u>Equipment Locking and Tagging</u>	COOP Section 6.6.4 MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.4 <u>Operational Limits Compliance</u>	COOP Section 6.6.3 COOP Section 6.2 COOP Section 6.6.7 COOP Section 6.4.2 COOP Section 6.4.9
C.5 <u>Equipment Deficiency Identification and Documentation</u>	COOP Sections 6.4.2, 6.4.3, 6.4.9, 6.4.10, 6.6.1, 6.6.4, 6.6.7, 6.6.12 MAN-071-IWCP, Integrated Work Control Program Manual
C.6 <u>Work Authorization and Documentation</u>	COOP Sections 5.6, 6.3.1, 6.3.2, 6.6.1
C.7 <u>Equipment Post Maintenance Testing and Return to Service</u>	COOP Sections 5.7, 5.10, 6.6.6, 6.6.7 Appendix 23 MAN-071-IWCP, Integrated Work Control Program Manual

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 7 of 12)

DOE ORDER 5480.19 GUIDELINES	IMPLEMENTED BY:
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C.8 <u>Alarm Status</u>	COOP Sections 5.10, 6.6.10, 6.6.11, 6.6.12
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C.9 <u>Temporary Modification Control</u>	COOP Section 3.3.4
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C.10 <u>Distribution and Control of Equipment and Systems Documents</u>	MAN-001-SDRM, Site Document Requirements Manual PRO-815-DM-01, Developing, Maintaining, and Controlling Documents
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Chapter 9, Lockouts and Tagouts

C.1 <u>Lockout and Tagout Use</u>	COOP Section 6.6.4 Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.2 <u>Lockout and Tagout Implementation</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.3 <u>Protective Materials and Hardware</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.4 <u>Lockout/Tagout Program</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.5 <u>Procedures for Lockout/Tagout</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.6 <u>Application of Lockout/Tagout</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.7 <u>Testing or Positioning of Equipment or Components</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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C.8 <u>Periodic Inspections</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
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APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 8 of 12)

DOE ORDER 5480.19 GUIDELINES	IMPLEMENTED BY:
C.9 <u>Caution Tags</u>	COOP Section 6.6.4 Chapter 8 and 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.10 <u>Training and Communications</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.11 <u>Lockout or Tagout Implementation</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.12 <u>Notification of Personnel</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.13 <u>Outside Contractors</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.14 <u>Group Tagouts or Lockouts</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
C.15 <u>Shift or Personnel Changes</u>	Chapter 9, MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual
<u>Chapter 10, Independent Verification</u>	
C.1 <u>Components Requiring Independent Verification</u>	COOP Sections 6.4.5, 6.6.8
C.2 <u>Occasions Requiring Independent Verification</u>	COOP Sections 6.4.5, 6.6.8
C.3 <u>Verification Techniques</u>	COOP Section 6.6.8 Appendices 25 and 26
<u>Chapter 11, Logkeeping</u>	
C.1 <u>Establishment of Operating Logs</u>	COOP Section 6.4.9

101

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 9 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
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C.2 <u>Timeliness of Recordings</u>	COOP Section 6.4.9
C.3 <u>Information to be Recorded</u>	COOP Sections 6.4.2, 6.4.9, 6.6.3.4, 6.6.7.2, 6.6.7.4, 6.6.9, 6.6.10, 6.6.12
C.4 <u>Legibility</u>	COOP Section 6.4.9
C.5 <u>Corrections</u>	COOP Section 6.4.9
C.6 <u>Log Review</u>	COOP Section 6.4.9
C.7 <u>Care and Keeping of Logs</u>	COOP Section 6.4.9

Chapter 12, Operations Turnover

C.1 <u>Turnover Checklist</u>	COOP Sections 5.6, 6.4.2 Appendix 11
C.2 <u>Document Review</u>	COOP Sections 6.4.2, 6.4.9
C.3 <u>Control Panel Walkdown</u>	COOP Section 6.4.2
C.4 <u>Discussion and Exchange of Responsibility</u>	COOP Section 6.4.2
C.5 <u>Shift Crew Briefing</u>	COOP Section 6.4.2
C.6 <u>Reliefs Occurring During the Shift</u>	COOP Section 6.4.2

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 10 of 12)

DOE 5480.19 GUIDELINE

IMPLEMENTED BY:

Chapter 13, Operations Aspects of Facility Chemistry and Unique Processes

C.1 Not Applicable
Operator Responsibility

C.2 Not Applicable
Operator Knowledge

C.3 Not Applicable
Operator Response to Process Problems

C.4 Not Applicable
Communications Between Operations and
Process Personnel

Chapter 14, Required Reading

C.1 COOP Section 6.5.4
File Index

C.2 COOP Section 6.5.4
Reading Assignments

C.3 COOP Section 6.5.4
Required Dates for Completion of Reading

C.4 COOP Section 6.5.4
Documentation

C.5 COOP Section 6.5.4
Review

Chapter 15, Timely Orders to Operators

C.1 COOP Sections 6.4.6.2, 6.4.6.3, 6.4.6.4
Content and Format

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1

(Page 11 of 12)

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
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C.2
Issuing, Segregating, and Reviewing
Orders

COOP Section 6.4.6

C.3
Removal of Orders

COOP Section 6.4.6

Chapter 16, Operations Procedures

C.1
Procedure Development

MAN-001-SDRM, Site Document Requirements Manual
COOP Section 5.5
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

C.2
Procedure Content

MAN-001-SDRM, Site Document Requirements Manual
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

C.3
Procedure Changes and Revisions

MAN-001-SDRM, Site Document Requirements Manual
COOP Section 6.1
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

C.4
Procedure Approval

MAN-001-SDRM, Site Document Requirements Manual
COOP Section 5.5
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

C.5
Procedure Review

MAN-001-SDRM, Site Document Requirements Manual
COOP Sections 5.5, 6.3.3
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

C.6
Procedure Availability

MAN-001-SDRM, Site Document Requirements Manual
COOP Sections 5.10, 6.3.3, 6.4.5

C.7
Procedure Use

MAN-001-SDRM, Site Document Requirements Manual
COOP Sections 2., 5.10, 6.1, 6.4.5
PRO-815-DM-01, Developing, Maintaining, and Controlling
Documents

APPENDIX 28

DOE ORDER 5480.19 CROSSWALK MATRIX FOR REVISION 1
(Page 12 of 12)

Chapter 17, Operator Aid Postings

DOE ORDER 5480.19 GUIDELINE	IMPLEMENTED BY:
C.1 <u>Operator Aid Development</u>	COOP Section 6.4.7
C.2 <u>Approval</u>	COOP Section 6.4.7
C.3 <u>Posting</u>	COOP Section 6.4.7
C.4 <u>Use of Operator Aids</u>	COOP Section 6.4.7 Appendix 16
C.5 <u>Documentation</u>	COOP Section 6.4.7 Appendix 16
C.6 <u>Review</u>	COOP Section 6.4.7 Appendix 16

Chapter 18, Equipment and Pipe Labeling

C.1 <u>Components Requiring Labeling</u>	COOP Section 6.6.5 SX-164, Plant System and Component Identification and Labeling
C.2 <u>Label Information</u>	COOP Section 6.6.5 SX-164, Plant System and Component Identification and Labeling
C.3 <u>Label Placement</u>	COOP Section 6.6.5 SX-164, Plant System and Component Identification and Labeling
C.4 <u>Replacing Labels</u>	COOP Section 6.6.5 SX-164, Plant System and Component Identification and Labeling

APPENDIX 29

CONDUCT OF OPERATIONS MANUAL REVISIONS 0 AND 1 CROSSWALK MATRIX
(Page 1 of 2)

COOP REVISION 0 SECTION	REV. 1 - NEW SECTION
1. OVERVIEW	4.
1.A. Purpose	1.
1.B. Scope	2.
1.C. Conduct of Operations Background	4.1
1.D. Implementation Requirements	3., 4.2
1.E. Disposition of Records	7.
2. RESPONSIBILITIES	5.
3. INSTRUCTIONS - GENERAL	6.
3.A. Operating Philosophy	6.1
3.B. Authorization Basis (AB)	6.2
4. INSTRUCTIONS - WORK CONTROL/CONDUCT OF WORK	6.3
4.A. General Controls	6.3.1
4.B. Plan of the Day (POD)	6.3.2
4.C. Pre-Evolution Briefings (PEBs) and Job Task Briefings (JTBs)	6.3.3
4.D. Work Stations and Control Rooms	6.4.3
4.E. Abnormal Events and Emergencies	6.4.4
4.F. Temporary Modification Control	6.3.4
5. INSTRUCTIONS - OPERATING PRACTICES	6.4
5.A. Access Control	6.4.1
5.B. Shift Relief and Turnover	6.4.2
5.C. Procedures	6.4.5
5.D. Standing, Operations, Shift, and Night Orders	6.4.6
5.E. Control and Use of Operator Aids	6.4.7
5.F. Communications	6.4.8
5.G. Logs and Round Sheets	6.4.9

106

APPENDIX 29

CONDUCT OF OPERATIONS MANUAL REVISIONS 0 AND 1 CROSSWALK MATRIX
(Page 2 of 2)

COOP REVISION 0 SECTION	REV. 1 - NEW SECTION
5.H. Conduct of Operations Assessment and Lessons Learned	6.4.10
6. INSTRUCTIONS - STAFFING AND TRAINING	6.5
6.A. Staff Requirements	6.5.1
6.B. Site Overtime Requirements	6.5.2
6.C. Training Requirements	6.5.3
6.D. Required Reading Program	6.5.4
7. INSTRUCTIONS - CONTROLLING SYSTEM OPERABILITY	6.6
7.A. Status Control	6.6.1
7.B. Configuration Control	6.6.2
7.C. Compliance Tracking	6.6.3
7.D. Lockout/Tagout (LO/TO), Caution Tag, and Information Tag Requirements	6.6.4
7.E. Component Labeling	6.6.5
7.F. Removing Systems and Equipment from Service	6.6.6
7.G. Termination of Operations Process and Authorization Basis Management	6.6.7
7.H. Component Lineups and Independent Verification	6.6.8
7.I. Response to Indications	6.6.9
7.J. Response to Alarms	6.6.10
7.K. Nuisance Alarms	6.6.11
7.L. Controlled Deactivation of Alarms	6.6.12
7.M. Resetting Protective Devices	6.6.13